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Medical Lib

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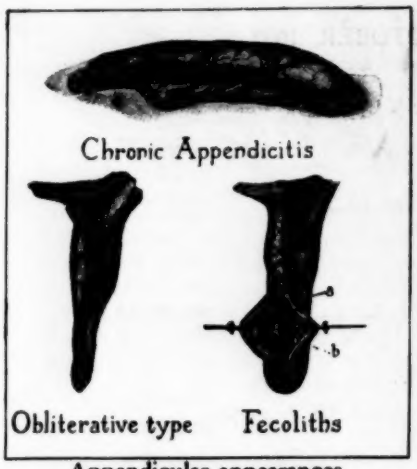

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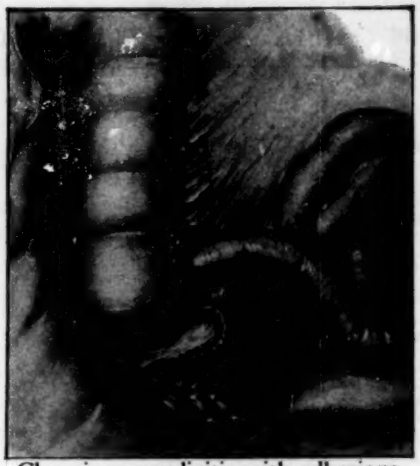

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On the Cure of Prolapse of the Uterus

ALBERT M. JUDD, M.D., F.A.C.S.

SENIOR ATTENDING OBSTETRICIAN AND GYNECOLOGIST TO THE KINGS COUNTY HOSPITAL; CONSULTING GYNECOLOGIST TO THE SWEDISH, JEWISH AND ST. JOSEPH'S (FAR ROCKAWAY) HOSPITALS; CONSULTING OBSTETRICIAN TO THE WYCKOFF HEIGHTS, CONEY ISLAND, EASTERN DISTRICT AND FLUSHING HOSPITALS; GYNECOLOGIST TO THE LONG ISLAND COLLEGE HOSPITAL; CONSULTING OBSTETRICIAN AND GYNECOLOGIST TO THE WILLIAMSBURG MATERNITY HOSPITAL; CHIEF OBSTETRICIAN AND GYNECOLOGIST TO THE BUSHWICK AND THE BROWNSVILLE AND EAST NEW YORK HOSPITALS,

Brooklyn, N. Y.

It is now four years since my first paper "On the Cure of Prolapse of the Uterus," by the method initiated by Sims, later improved by Emmet and still later improved by Dr. L. Grant Baldwin of Brooklyn recently deceased, was published. (*Am. Jour. Obst. LXXIX, No. 2*, 1919.)

This generation of gynecologists has produced but few such masters of vagino-plastic work as Dr. Baldwin. In my previous paper I stated that the credit for the later development of this technique was due entirely to Dr. Baldwin and that I was following out his methods as closely as it is possible for an individual to follow out the ideas of others.

I had seventy cases to my credit at the time of my first publication; since then, I have added sixty more. My associates in the various institutions have done thirty cases up to the present writing. Fifteen of these cases having been performed by Dr. Wm. Pfeiffer and seven by Dr. Rynd.

Several questions naturally arise in the course of the years of additional experience; viz:—

First—Am I still unqualifiedily satisfied with the results? Yes.

Second—Why? The simplicity of the method although seemingly complicated; its freedom from shock and absolute freedom from complications frequently accompanying any invasion of the abdomen.

Third—Have I made any change in the technique? One simple thing only and that on the suggestion of Dr. Bonner, for many years my associate at the Jewish Hospital. After having seen the carvival fixation suture break numerous times, he suggested that we have a second suture as an emergency stitch, so placed that it could be immediately picked up, run through the cervix, tied and the crevix and uterus again be placed in their normal positions; the crevix held up in the hollow of the sacrum and the fundus thrown forward. This little suggestion has been of immense value to me. However, as my understanding of the reason for the breaking of the suture became clearer; the accident did not happen so often. The reason for the breaking of the sutures is due to the strong pull exerted upon it when introducing the silver wire sutures. The use of counter-pressure when such pull is evident saves time and patience.

The sutures now used are of No. 2 chromic gut, this being one of the few occasions when I have any use for chromic gut.

The added experience has remedied, to a great extent, my mistakes, as explained in my former article; notably, a better result so far as the cystocele is concerned. Still, where there is failure to obtain good union on the anterior wall, I have not had such a result as would leave any amount of decensus of the bladder as would give symptomatology referring to this organ and the uterus has been held up even when this has occurred.

No operative procedure has one hundred percent perfect results; but no type of work has ever given me such satisfactory results and such relief to the patients, as the "Sims, Emmet, Baldwin."

It is harder on the surgeon because of the time and the fussiness necessary for its execution; especially for those who have not done a great number. On the other hand, it is much easier in both its immediate and ultimate results so far as the patient is concerned.

The history of the development of the procedure was recited in the paper already mentioned. The reasons for the adoption of this operation were given at the same time. The description of the operation outlined below is taken verbatim from the same paper. I have not been able to improve upon it. It is best learned zy watching the operation performed:

The first important step is to assure yourself that the uterus is replaceable and retainable; in other words, there must not be any complicating adhesion, old exudates or other lesions which would tend to defeat the mechanics of the operation. The preparation so far as surgical cleanliness is concerned is the same as for any other procedure. After satisfying ourselves that we have a prolaps ewithout complications, the patient is placed in the Sims' picture on a table which has the head lowered. This slight Trendelenburg posture is of aid in displacing the prolapsed bladder upward. A great and almost indispensable aid in retaining the patient in the Sims' position is to bind the feet and legs together with a wide bandage.

The next step is the introduction of a Cleveland self-retaining speculum of which there are two sizes made to facilitate its use either in moderate or exaggerated cases of prolapse. In the perforation at the end of the tongue is placed a suture about twelve inches long with a needle on one end. The suture is tied at its middle to allow room for another tie later. I find heavy silk the best material to use here.

The following step is curetting if necessary and such work on the cervix, trachelorrhaphy or amputation, as the individual case demands. This being finished the suture previously placed in the speculum is passed through the anterior lip of the cervix or its remaining stump and tied, thus drawing the cervix into the hollow of the sacrum and in this manner throwing the fundus and body of the uterus into a position of exaggerated anteversion and retaining it there during further steps of the operation. Now if the operator will push up the cystocele with some blunt instrument or the finger the case may be studied and the points for further procedure chosen. The denudation best made first is in the left lateral or lower vaginal sulcus as the patient is lying. This is selected by using a sharp hook and picking up a point in the sulcus a little posterior to what would be the normal position of the cervix, which can, with some degree of force, be drawn to a central line. This point having been chosen it should be denuded of the mucous membrane for an area about one-half by three-fourths of an inch, the longer diameter being in line with the long axis of the vaginal tube. A similar point is chosen in the right or upper vaginal sulcus and denuded; next a denudation is made on the anterior vaginal wall at its center with its posterior extremity about one-half inch in front of the cervix. It should be of the same length as the lateral denudations but wide enough to take care of the lateral denudations which are to be subsequently brought together at this point. Its transverse diameter should usually be about one and a half times that of the lateral denudations.

The next procedure is to bring together by means of a running suture of fine gut (No. 0) the lateral contiguous margins of the denuded areas, the left margin of the of the right denudation to the right margin of the central and the right margin of the left to the left margin of the central. This procedure spreads out the denuded areas in the shape of a half moon with the sharper ends cut away.

The next step is the insertion of two or sometimes three silverwire sutures under the denuded areas bringing them all together in the center. No. 24 or 26 is the best size for this, which is the part of the operation caring for the prolapsed uterus. The wire is introduced by means of a carrier of silk on a needle. It should be carried under each of the original denudations separately from margin to margin, starting and finishing laterally just outside the denudation. Before passing under the lateral denudation the tissues underneath should be picked up or pulled out by means of a sharp hook so as to obtain a good hold on the underlying tissues which consist of that portion of the levator ani muscle and its fascia arising frm the descending ramus of the pubes on each side, and that portion of the endopelvic fascia lying above it. These sutures are now twisted while pressure is made on the central denudation thus bringing them all together and making an artificial pessary or bar in front of the cervix. The sutures are cut about one and one-half inches long, the ends bent over into a circle or protected by a split bullet.

A study of the case now will show two crescentic folds on the anterior vaginal wall extending from the outer margin of the previously completed work down to the base of the subpublic ligament in the neighborhood of the meatus urinarius, bounding the external limits of the cystocele (Fig. 7). These two longitudinal folds are now denuded and their proximal margins united with plain fine gut (No. 0) and the spread out, denuded areas united by finer silver-wire (No. 27 or 28). The sutures are passed the same as previously with the exception that those picking up the upper or right denuded area are passed in a direction from above downward toward the meatus and those picking up the lower or left denuded area in a reverse direction thus drawing the vaginal wall with the cystocele upward toward the cervix (Fig. 8). From three to six sutures are required for the cystocele proper. Before twisting these sutures the cervical fixation suture should be cut, the Cleveland speculum removed and a Sims' speculum substituted. Then these wires are twisted and cut somewhat shorter than the others and cared for in the same manner, except that it is best to bend them laterally at right angles at the vaginal surface. With union there will now be an absolute cure of the prolapse of the uterus and bladder.

The patient is then changed to the lithotomy position and the rectocele cared for by any good flap-splitting operation; or in cases of very large rectocele, I prefer the Weisbrod procedure as carried out by the late Dr. Weisbrod at the Wyckoff Heights Hospital. This latter procedure has been described by one of my assistants, Dr. Harry Koster, who formerly worked with Dr. Weisbrod. His article was published in the *American Journal of Obstetrics and Diseases of Women and Children, Vol. LXXX No. 2*, 1919.

375 Grand Avenue.

Orthostatic Albuminuria

Observations made by Wilber E. Post and William A. Thomas, Chicago, on approximately forty cases of orthostatic albuminuria indicate that the appearance of variable amounts of nucleo-albumin and serum-albumin in the urine in such cases is analogous to changes taking place in the blood and body tissues. The condition, which appears most frequently in the young, in certain types of individuals, particularly the undernourished, rapidly growing ones, with unstable venous and vasomotor mechanisms and frequent or chronic infections, is accompanied by a pulse pressure smaller in the upright than in the lying position, is aggravated by immobility and presages no progressive renal disease. Repeated and accurate functional tests and blood chemistry observations reveal neither constant deviations from the normal nor constant variations between the upright and horizontal positions. Neutralization or mild alkalization of the urine produces changes in the kidney, blood or body tissues which are followed by disappearance of nucleo-albumin and serum-albumin from the urine, by restoring to normal the physiochemical state of the proteins and preventing their escape into the urine. Neutralization may be brought about by adiministration of various alkaline salts, such as sodium or potassium acetate, or sodium citrate or calcium lactate, and similarly by the vegetables and fruits in the diet that contain alkalizing salts. Other factors influencing this form of albumin in the urine are: circulatory efficiency in the kidney itself or in the body itself, and metabolic efficiency in the blood and body tissues as influenced by other factors than circulation, such as the conditions producing rapid growth in youth, and by infections and intoxications.—(*J. A. M. A.*)

Fundus Changes in Nephritis

HOWARD CLARKE, M.D.,

Honolulu, T. H.

The fundus changes that occur in the eye grounds of nephritics are so fully described in the text books that a rehash of only the salient things is permissable.

Two forms of eye grounds pictures can be distinguished:

1. When the altered blood condition is responsible, for example, those associated with acute nephritis as after scarlet fever, other infectious diseases and pregnancy.

2. When general arterio-sclerosis causes chronic nephritis and fundus changes.

A temporary blindness may occur in uremia without any fundus changes, but this is a toxic affair which is central in origin.

The old term, albuminuric retinitis, has been thrown into the discard by opthalmologists for the very excellent reason that the albuminuria does not cause fundus changes and there is no inflammation of the retina. Although a profound disturbance of the retina takes place, there is no small round cell infiltration or connective tissue growth that would surely show if it were a true inflammation. The changes that take place are due to transudation, a leaking from weakened vessels.

In the case of chronic interstitial nephritis with sclerotic eye vessels it is easy to understand the exudates and hemorrhages. The disc usually clear, twisty arteries with well defined white reflexes indicating thickening, the veins full and deeply compressed where crossed by the hard arteries, the great number of small vessels not ordinarily apparent, the numerous flame shaped hemorrhages and finally the radiating lines around the macula make an easily understandable picture. The radiating lines are small capillaries with exudate that is coagulated albumenous lymph that in old cases has undergone fatty changes.

In the other type of cases where no apparent change in the wall is visable the picture is different and the explanation of its causation is a matter of opinion rather than proof. In these cases the disc is usually obscured from exudates and edema, the retina may be detached for quite some distance and the vessels disappear in cloudlike masses or else ride over them. The veins are greatly engorged, there may be a choked disc, in fact all the signs of the so called albuminuric retinitis of acute occurrence may be simulated by a brain tumor. In this form we do not get the radiate or star shaped figure around the macula. We oftentimes do not find hemorrhages and the blood tension is not always raised.

The usually accepted explanation of this form is that a toxin causes a weakening of the vessel walls and allows the transudation of serum to take place. Others believe that these cases are largely due to cerebral pressure alone because trephining and spinal puncture have revealed increased pressure. A definite relationship between retinal changes and nephritis cannot be proved as yet satisfactorily, nor why it is that nephritis so often exists without intra ocular changes being visable.

The eye grounds in the arterio-sclerotic form never recover completely to normal and their presence is a fatal prognosis within two years with more than half dying within one year of their observation.

In the other type of fundus changes associated with nephritis, it is not uncommon for complete recovery to take place and even large patches of retinal detachment may recover without any damage to vision or leave but the slightest trace of their ever having existed.

It must be borne in mind that only one-fourth to one-half of all cases of nephritis show eye ground changes. It is much better for the internist to be informed of the nature and cause of the retinal changes by a careful description of the fundus than to attempt a definite diagnosis of kidney and vascular disease from the eye ground picture alone. There is nothing to prevent the two main types from existing together and other conditions like cerebral tumor may give identical picture with that found where a true nephritis exists.

Evidences of hypertension can occur long before nephritis is discovered but the blood pressure in these cases will be high and for a long continued time.

It is of frequent occurrence for persons around middle age to have high blood pressure without any apparent change in the retinal arteries and the explanation of why this should be is not yet settled.

It may be significant that the vessels of the eye enter a closed cavity filled with vitreous and the tension of the globe undoubtedly has a modifying action on the amount of resistance the blood current meets. This may also explain why the evidences of high tension in the arteries of the fundus are sometimes not confirmed by high pressure in the brachials.

For many years it has been established that arterio-capillary fibrosis may exist and progress before evidences of nephritis is obtained. This condition is of course associated with high tension. The intra-ocular examination may give valuable assistance in determining the condition of the capillaries of the vascular system.

In arterio-sclerosis the small vessels of the kidneys are affected early and doubtless undergo the same changes that are seen in the capillaries of the eye, but nephritis does not occur until the essential secreting substance of the kidney is damaged and it is not until then that we obtain in the eye the marked edema, hemorrhages and deposits so common with acute nephritis of infectious disease or pregnancy origin.

With regard to the type of changes produced without preceding changes in the vascular coats, it may be stated that a sort of exosmosis takes place. This may be due to increased cerebral pressure and be a mere passive congestion, or explained by an unknown toxin which weakens the walls of the vessels and allows the plasma and corpuscles to escape through them.

The fact of the retina, kidney and brain being most frequently affected may bear some relation to the fact that all these organs are supplied by terminal vessels which having no collateral circulation cannot escape the damages from obstructed circulation. rather than look for a toxin with specific action on those organs.

Medical Science in the Assistance of the Adjudication of Cases at the Bar*

Otto H. Schultze, M.D.

New York

In an experience of over twenty-five years I have found that frequently there is something that lies just between the work of the medical man and the work of the detective and the work of the attorney in homicide and murder cases, where someone is needed to correlate the things that are found in attempting to elucidate the truth and this very often redounds to the benefit of the accused. This sometimes proves embarrassing because while it is enjoyable to break a lance with an opponent it is not enjoyable to break one's neck. Recently in a case adjudicated by three members of the Appellate Division of Columbia County I thought I was to be indicted. It was one of those cases in which marvellous to relate, there was no difference in the medical opinion. It involved insurance to the amount of $110,000 and the insurance company claimed the body of the deceased was not that of the insured. The deceased had been very badly burned. It reminded me of the epitaph of Mark Twain on the servant who lighted the kitchen fire with kerosene: "Well done, good and faithful servant." The insured had measured 5 ft. 9 in. in height; on piecing together the fragments of the femur of the dead body it was estimated to have been 6 ft. 1 in. tall. He was burned in a pine cottage that went up in flame and smoke and if he had died from the burning he would have had time to have inhaled some of the soot, but chemical examination of the body showed it was not breathing at the time of death. There was no carbon monoxide in the blood in the center of the body. No food was found in the stomach. Heat will preserve the parts of the lungs very well and the sections from this body looked just as well for the purpose of diagnosis as lungs from a fresh body. They showed the changes of influenza, being filled with pus. The lungs showed influenzal change, the man had not inhaled soot, he had not gotten carbon monoxide through his blood, there was no food in the intestines. The deceased was some poor man who had not only not been treated for his disease but had not even been fed. This occurred during the epidemic of influenza. I hope the case will go to the Court of Appeals so that I may be assured I am not a scoundrel.

Long ago a case attracted my attention and interest. It is an example of the reliability of circumstances that can be weighed. No evidence so appeals to a jury as that of an eye witness; they want a man to say he saw the deceased assailed with a weapon and saw him slain. They had that in this case in the shape of evidence from two eye witnesses who testified they recognized the prisoner, had seen him pursue his victim and strike him down before their eyes, with a pen knife. The blade of the pen knife measures 1¾ inches and the wound measured 7 inches and was not wider at any part than ½ inch. The man was convicted of murder in the first degree, and when they found the man who had done the stabbing the first man was pardoned by the Governor.

This was an instance that rested on measurements. In another case the measurements were very close and this case occurred in Connecticut. A man was found, still alive, on the sidewalk in front of a house where rooms were rented, only one person, a woman, having found on the stairway leading to the rooms of that woman. When the chief of police, following the death of the man, went to see this woman, whom he knew, he said he would have to search the place; he found a man's blood stained hat, a bottle of liquor, and some of the woman's garments which were blood stained, an ironing board and an iron. The hat fitted the creases in the head of the deceased and the cause of death was fracture of the skull, so it was assumed he had been killed by a blow with the flatiron. The woman had not made any defense. Three or four months afterward when the case was about to go to trial the district attorney was troubled to account for where all the blood had come from, and where the deceased had met with his injury.

On looking over the superficial skin of the forehead the marks were found on the wrong side in connection with the dents in the straw hat. At my suggestion the corrugated marks on the rubber pads of the stairway were measured. The character of the fracture was that indicating a blow of considerable force with inability to carry through. One of the fragments of bone passed through the jugular and opened into the internal canal. The woman's garments showed the greatest amount of staining on the left shoulder. The man had fallen down the stairway and the accused, hearing the thud, had picked him up with his right ear resting on her left shoulder. Then, fearing for her reputation, she had placed him out on the sidewalk. The district attorney said, "You have busted up my whole case, thank God."

Another instance occurred in the Bronx where it was thought they had to deal with a terrible crime. Examination of the body and the automobile in which the death occurred and the clothing of the accused and hearing the statement of the accused, all of the evidence showed that there was no intent, premeditation or design to kill. It was one of those cases where an act of sexual perversion led to the death of the deceased.

A case that is interesting is one where by putting a few things together a conclusion could be drawn. It occurred to the district attorney to find out what the deceased had to say about it. A dead body can sometimes give one very useful facts. The accused was old Dr. Wilkins whom many people to this day believe to have been innocent because after his conviction he wrote a letter protesting his guiltlessness and then committed suicide. When one has a statement by the accused or his story by word of mouth you have a good chance to follow it up and either prove its truth or its falsity. I will take only the high spots of this case. Wilkins and his wife on a winter night went from their home here to their cottage at Long Beach and he said that on approaching the house they saw a light. Suspecting that burglars were in the house he told his wife to wait outside and he himself entered the door when three men attacked him and the last he heard before losing consciousness was someone saying: "John, go out and quiet that woman." His hat was battered to pieces, his head was intact. His wife's head was battered to pieces, her hat was intact. A stick pin of which he claimed he was robbed was found concealed in one of his pockets.

* Presented before the Society of Medical Jurisprudence, May 14, 1923, at the New York Academy of Medicine.

In one case some years ago I had occasion to telephone the chief of the Homicide Bureau that I had just discovered a crime newly perpetrated and was about to send down the witnesses. In this case it was really easy to come to a conclusion. A young ambulance surgeon had visited the apartment and in addition to turning in a report of "D.O.A.," dead on arrival, had informed the neighbors in the house that the woman had died of nephritis. The deceased and all the witnesses were colored. Relatives in the south were notified to come on and arrange for the burial. No one suspected anything wrong. An autopsy was performed and I found the deceased had died of manual strangulation. One little girl witness had shared the room of the deceased and the other guest was the perpetrator of this crime. There were people who could prove that the deceased was in that room and to the presence there of Preston Gould and this led to a warrant for his arrest. The conscience of Preston Gould led him to betray himself. He was witnessing a ball game with a little colored fellow who noticed his unusual abstraction and said to him, "You act like there was something on your mind." "There is something on your mind." And Preston Gould replied, "Well, if you want to know I done killed a woman in New York." The colored boy went to the Mayor of the town who called up New York and found Preston Gould was wanted for murder. When my evidence was given the coroner's physician testified that a good autopsy had been done but "the doctor had neglected one point; he should have made the docimetric test on the liver." Pressed for an explanation of this test he said it consisted of mashing the liver up and mixing it with lamp black and then that was filtered. It is like playing cards; you put down your money and you lose it. When that filter is clear it shows if the glycogen has disappeared from the liver; the glycogen represents muscular strength and a woman being strangled to death would put forth the last muscular effort. I explained that glycogen was a soluble substance and one could not tell by looking at the liver mass whether it was present or not. One of the jurors asked the doctor how many cases of strangulation he had ever examined; he replied, "One." Asked if he performed the docimetric test on the liver in that case, he answered, "I did not."

Sometime ago a police officer arrested a man on the lower east side, because he presented the appearance of wanting to get away on the charge of carrying concealed weapons because he had a very sharp knife. That officer performed a service that should have placed him in the Detective Bureau. The man had a belt of money, not around his waist where such belts are usually worn, but doubled up in his pocket. This case shows the usefulness of recording everything observed. Some distance away the body of a murdered man was found with thirty-seven stab wounds. The question was to identify the money belt as the property of the murdered man, and this the accused had very thoroughly arranged for. There were three stab wounds through the belt that corresponded to the position of three of the wounds on the deceased. He had been stabbed twice through $200. The knife found in the pocket of the arrested individual was stained with blood and in the blood were wool fibres, red, yellow and blue, which corresponded to the mixed goods of the coat of the deceased. The murdered had wiped the knife on the coat and then stuck it in his pocket.

An interesting case occurred in Nassau County where the accused telephoned "Edith has killed herself." The death occurred in a boarding house for school teachers and the dead woman's sweetheart was visiting her at the time. He said he was asleep on the sofa with his right arm under the pillow and was awakened by the shot. There was a spray of blood on the cuff of his right shirtsleeve.

There was an incidence, an unusual one, of a conviction for murder without the actual cause of death being given. It was a remarkable case and occurred in Connecticut. A woman's body was found in the summer in an advanced state of decomposition. Two bottles of bichloride of mercury were found and a lot of clothing and here was found cause for inquiry for only one of an article that is used as clothing in pairs, such as one of a pair of stockings, was found which was curious if the woman had disrobed before killing herself in this lonely spot. There was one stocking and one shoe, an unused corset string, and an interesting hat pin. Several teeth lay on the ground where they had fallen from the mouth as decomposition progressed. Of all the people in the neighborhood only two, a man named Fair and another named Devereaux who lived in the same house, did not appear on the scene. One of them had been married and his wife had disappeared some time before. Curiously, a correspondence apparently from the absent wife had been kept up with relatives in the Middle West, begging for money, etc., and one of these relatives came east and on looking up the wife learned she had disappeared some time before, yet the postmarks on the letters apparently written by her had been from this town. A year had gone by when these relatives came along and the district attorney thought something might be learned by examining the remains of the body of the woman who had apparently committed suicide by bichloride of mercury. The skeleton was preserved and all the teeth that had been found were replaced and inquiry among dentists in the nearby town brought forward two who identified work they had done on these teeth and the deceased was identified as the missing wife. A domestic was located who testified that the dead woman had owned two hat pins like the one found, and the other was found in the home of the missing wife. I always had the opinion that it was essential in connection with a murder case to prove the cause of death. I found in that case that it was not essential; it was merely essential to prove that a certain person had disappeared and on finding that person dead the suspicion of murder may be adduced. [illegible] case a witness came from a neighboring house and testified that on the night the wife disappeared she heard two yells, one sounding like the cry of some one attacked and the other like a cry from a person dying, and that on running to the house to learn if she could be of help she saw all the lights go out and only silence met her knocking on the door.

Discussion

Dr. Ernest E. Smith: We have all been intensely interested in the lecture of this evening and in the cases illustrating the application of science to the detection of crime. I have been particularly impressed with the fact that we have here an application of science which while unique and unusual in the experience of all of us, yet after all illustrates certain principles that operate generally. Those of us who are engaged in diagnosis find occasion to use in many ways the same ingenious inquiries, the same kind of skill that applies in this medico-legal subject; and in industry, whatever it may be, there is hardly one that does not have its scientific aspect in finding occasion to bore under the surface, to use unusal modes of investigation and arrive at conclusions indirectly by means of technical knowledge ingeniously applied.

I remember many years ago a case of a young man who was treated for hemorrhages of the lungs and he was anxious to be sent away from home the better to expedite his recovery from this unfortunate condition supposed to be caused by tuberculosis. It occurred to the attending physician that no one had ever seen him have a hemorrhage as they always occurred in the night

and only the evidence was found the next morning. So he collected some of the hemorrhagic blood and sent it to a laboratory for examination with the request that special attention be paid to its identity, and the resulting report showed that the specimen submitted for examination was sheep's blood. Investigation disclosed a bottle of sheep's blood hidden in a closet in the patient's room and it was then found that he was anxious to get away from his occupation and get a free trip out West. Physicians have had many experiences of this sort. I think the outcome of the presentation this evening is to show the value of technical knowledge applied many time ingeniously, whatever our occupation, whether it be concerned with the problems of crime, with the problems of illness, or with the problems of life that come up whatever they may be.

Mr. Joseph Beihilf: As assistant corporation counsel, about a year ago I tried an accident case where a lady, the wife of a postman and who had sixteen children, claimed she had fallen down as a result of a defective sidewalk and suffered a fractured hip and shoulder and from that time on had been compelled to use crutches as a result of the shortening of one leg. There were some discrepancies in her story. Although there was proof that she lay in bed for three months and afterward always used crutches, it was shown that she had never resorted to medical treatment, had never had the hip bandaged or put in a plaster cast, etc. As she walked with the crutches it was very apparent that she really had a shortening of one leg as the foot swung clear of the ground. I was very much interested in this case and made careful researches in the Academy library and believe I was thus enabled to diagnose her case, for I found a description of a condition which might well have been the duplicate of this case. It was an abnormality most generally found in the negro race. This woman, although not known to have negro blood, was of very dark complexion. Investigation was made to see if she had had any previous accidents and although she claimed never to have had any it was found that on three different occasions she had brought suit and had recovered damages for an accident which had brought about a shortening of one of her legs. On one occasion she received $1,000 damages, from the Third Avenue Railroad Company and from Brill Brothers and the Interborough she received settlements. On our presenting this evidence her attorney withdrew the case.

Dr. Henry W. Berg: As I was listening to this impressive lecture I wondered if there was any way of classifying the data requisite to the handling of a homicide case. Can the medical man systematize a set of directions by which the somatic details can be obtained concerning each individual case in a manner similar to the method adopted by lawyers in preparing the legal side of a case. In that way one would be enabled to schematize this method of the medico-legal investigation in a scientific way. Entertaining as the stories of the speaker were, they do not teach a lesson unless their elements can be classified so that even the less competent medical man will be able to cover the whole field and thus aid in differentiating the innocent from the guilty. This lecture has led me to think in the direction of the necessity of systematizing the method of examination in a case of murder so as to cover the whole field. In some types of civil cases in which only money is involved also, the issues are sometimes most tragic.

Take, for instance, a case like this: A laborer was injured by striking his leg against a piece of stone while engaged in his daily occupation. He received a wound three inches long which healed superficially within four or five days. On the sixth day he had a violent chill and was removed to a hospital where a loud, blowing murmur was heard over the apex of the heart. The man had never previously been ill. The clinical study showed that there was a lesion of the heart secondary to the wound on the leg and the man died four days after the initial chill from acute septic endocarditis. His widow was entitled to compensation for the loss of her husband's life, but the insurance company combatted the claim, maintaining that the death was due to heart disease and not to injury received during the occupation of the man. Death was due to an infectious bacterial endocarditis secondary to the wound received over a week before the man's death. The object of my speaking of this case is because when a man dies from such a condition the body should be carefully examined to discover if there has been a recent injury which might have caused secondarily the condition which resulted in death.

Sometimes, again, a human being suffers injuries which result in sepsis which leads to unilateral or bilateral septic bronchopneumonia, and if such injuries are received during the pursuance of a workman's occupation they should be compensated for. It is easy to obtain the pathological evidence of such injury, sometimes only of slight character. To come to another branch of cases properly included in the subject of this evening, it is also easy to prove that a patient is or is not suffering from an actual pain. In other words, whether a patient is or is not malingering. Recently a German observer demonstrated the possibility of obtaining accurate evidence of the actual existence of pain by an objective test,—that is, making pain an objective symptom. He counted the pulse of the patient several times to ascertain the normal frequency for that individual, which we will say was 80. On counting it three times with intervals of a few moments he found an average beat of 80 to the minute and accepted this as the patient's normal pulse. Then he pressed over the alleged painful spot and the pulse for some seconds became slower and immediately after he stopped the pressure the pulse went up to 120, in cases where the pain was genuine. This is a very valuable observation for by it you can prove pain objectively and negative pretended pain.

Mr. John Kirkland Clark: Mr. Beihilf's case of the woman with the congenital malformation reminds me of an interesting case we had in the District Attorney's office some twelve years ago. The association which hunts down spurious accident cases brought in a woman called Banana Anna. Her habit was to drop a banana skin on a sidewalk or flight of steps and pretend to slip on it and subsequently develop a hernia in the region of the umbilicus for which she claimed damages. She really had an umbilical hernia which had proven a source of considerable revenue to her before she was exposed as a trickster.

Dr. George Dow Scott: I would like to ask Dr. Schultze if there are cases of pure circumstantial evidence practically without clues. I have in mind particularly the Carman case at Freeport. I can imagine an hypothetical case of the criminal shooting through the window blind from the outside and leaving no foot prints on hard, frozen ground, the crime perpetrated in an isolated neighborhood with possibly the victim the only person in the house. But are there cases that go to the jury of pure circumstantial evidence without any evident clues?

Dr. Schultze: In closing the discussion, I may say that the situation sometimes arises in the investigation of a case where no clues offer themselves and only circumstantial evidence seems to point to the guilt of the accused. Yet to one who has been trained to the study of such a situation the most dangerous thing to affirm is the impossibility of anything. Thomas Huxley said, "Although I know the upper extremities of a human being are homologous to the wings of a bird, I would not deny there were angels because I have not seen any." When a case is apparently all prepared and certain evidence is assumed as correct, one with the necessary training in whatever the technical subject may well point out that things that are taken for granted as occurring in his clinical experience are also duplicated by things that occur after death as natural processes of decomposition and decay.

In one case the evidence was clear in a circumstantial way pointing to the guilt of the accused. There were a girl and two boys in the case and they had been together and one of the boys and the girl were found drowned. There was evidence of jealousy, of the oar, of the tiller and there was blood oozing from the ear of the boy so the cause of death was attributed to fracture at the base of the skull. No one exhumed the deceased to see if his skull was fractured or not. Such things as that may occur again and again until everyone is educated to realize that facts that hold in evidence must be gotten together. They asked me if oozing at the ear was not caused by fracture at the base of the skull and I answered in the affirmative, but added that I had taken occasion to examine the skull and it was intact. No matter what position one is in he should stick up for what is true and what is right and what is fair. There are some cases still doubtful and will be until all the facts are gathered together, facts weighable and measurable, not understandings of conduct or deportment, but things you can put on a scale, or in a test tube, differentiating between sheep's blood and human blood. Every one in a while the clinical pathologist is able to make the most wonderful ten strike.

In reply to Dr. Berg, there are countless cases very instructive in regard to obtaining data as to the truth in doubtful cases. One such case in my recollection arose in the corporation counsel's office in connection with a deceased person. The medical examiner gave the cause of death as a reduced dislocation of the shoulder and toxic psychosis. Among all the data of the observations made on the case while in the hospital there is only one fact that stands out in the history that corresponds to the postmortem and that was an observation of a house officer that there seemed to be asthmatic breathing. The poor woman died of sarcoma which had completely compressed one bronchus and was pressing on the other. The point is not to make an assertion that you don't know the cause of and label a condition of mind clouded by suffering "toxic Psychosis" when the patient is dying of malignant sarcoma. She had slipped on the steps on entering the hospital and dislocated her shoulder which dislocation had afterward been reduced.

Another case was that of a chauffeur who was obliged to suddenly stop his car on Central Park West because a horse of the Street Cleaning Department had turned unexpectedly in front of him. He stepped out to crank his machine and had stooped to the handle bar when he dropped dead. He had a complete laceration of the small mesentery, as was discovered at autopsy.

Weil's Disease or Icterus Gravis (Acute Infectious Jaundice)

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Fieldler's disease or Weil's disease is an acute specific febrile disease characterized by jaundice, muscular pains, remittent fever, enlargement of the liver and spleen, and nephritis.

It appears that in the great majority of true cases, the disease is due to the *spirochaeta icterohemorrhagiae of Inada.*

Japanese investigators first found the spirochaeta icterohemorrhagiae in rodents, and demonstrated these parasites in the kidneys of field mice. These organisms are excreted in the urine.

The *chief symptoms* are general malaise, muscular and abdominal pains, chilliness, weakness, fever, and jaundice. Bleeding from the mucous membranes may occur. Albuminuria is quite common. Many of the milder cases are indistinguishable from ordinary *catarrhal jaundice.* Some cases resemble instances of severe acute infections cum ictero, while still others may be mistaken for typhoid fever.

Neill mentions 19 outbreaks of this disease in the United States—from 1850-1915. He refers to outbreaks at Austin, Minn. (200 cases—1910); Andover, Me. (135 cases—1908-09); Calumet, Mich. (675 cases—1897-8); Geneva, N. Y. (200 cases—1888); and Savannah, Ga. (80 cases—1880).

To detect the spirochetes in man—examine the blood films (Romanowski stains or one of the silver impregnation methods), examine blood by dark field illumination. Blood may be injected into the peritoneal cavity of a guinea pig.

If the spirochetes are present in the blood the guinea pig will usually die in about 10 days—jaundice and hemorrhage will be found at postmortem. The microscopic examination of the blood for the spirochetes is not very satisfactory, because they are not very numerous in the blood of human cases. Injection of *urinary sediment* into the peritoneal cavity of a guinea pig and the examination of the urine for spirochetes are two important methods for the detection of the spirochete in human cases.

Herrman of New York states that Froehlich in 1879 was able to collect the records of 30 epidemics and added a report of four small epidemics occurring in the German army between 1875 and 1878.

In 1886, Weil reported four cases of a severe type of this disease, associated with an enlargement of the spleen and albumin in the urine. This form of acute infectious jaundice has been called by his name.

In 1913, Herrman reported a series of 98 cases of infectious jaundice which he had observed from 1907 to 1913. He emphasized the facts that indiscretions in diet play no part in etiology and that cases occur periodically at a certain season indicating an infection, and that the infectious material probably enters the body through the nasopharynx, is then taken up in the circulating blood and has a selective affinity for the bile ducts of the liver. He states further that (*N. Y. Med. Jour.*, June 8, 1918), there is no conclusive proof that the infectious material is conveyed by food or water.

One attack renders the patient immune to future attacks. Noguchi (1917) found the spirochete in the wild rats of New York City.

Garnier and Reilly in a study of 1,300 cases of infectious jaundice, only encountered four cases in which typhoid bacilli or paratyphoid bacilli seemed to be responsible for the infectious jaundice.

Villaret in referring to the treatment of spirochetal jaundice says that he uses mainly—diuretics, lactose drinks, hexamethyenamin, baths to reduce fever, and venesection for uremic symptoms.

Reiter (1919), has successfully transmitted the disease by means of a biting fly, Haematopota pluvialis. He has shown that the spirochetes can retain their vitality for seven days in water and in damp warm soil.

Garnier and Reilly (1920) warn that spirochretosis should be suspected in every case of febrile jaundice; return of fever after a phase of pyrexia confirms the diagnosis. If the fever persists during the entire phase of the jaundice and drops gradually by lysis, then *typhoid* or *paratyphoid fever* should be suspected. Jaundice, *without fever* or general symptoms usually excludes spirochetosis.

Garnier (1920), warns that while spirochetal jaundice may assume all the forms of infectious jaundice yet there are cases for which spirochetes are not responsible. Spirochetal jaundice is the only one among the diseases accompanied with jaundice of which the etiology seems to be now clear.

Garnier and Reilly found (June, 1920) that the jaundice was of *spirochetal* type in 30.4 per cent. of their 1,300 cases of jaundice, and that it was of the *apyretic acute type* in 61.9 per cent. and of the mild infectious type in 4.9 per cent.

In one of their cases a scarlatiniform rash preceded the jaundice. The young man recovered completely in about a month. The *urine* contained the spirochetes, confirmed by inoculation of guinea pigs. The patient suffered from myalgia, headache, gastrointestinal disturbances, fever, depression and herpes, then came the rash and jaundice. There was no desquamation.

In the *Weekly Public Reports,* Vol. 33—Part 1, 1918, Page 717, No. 19, May 10, 1918 (U. S. Public Health Service) Neill discusses "Acute Infectious Jaundice in the United States." He defines it as an acute infectious disease characterized by malaise, prostration, and gastrointestinal symptoms at onset, by fever of varying degree and by jaundice of varying intensity and duration.

Outbreaks of this disease have occurred among the British, Russian, French, and Italian troops during the late World War. A number of outbreaks have occurred in the United States from time to time.

Some cases occurred among Dartmouth College students at Hanover, N. H. about fourteen years ago (J. M. Giles, 1908). Cases of this condition occurred also at Ann Arbor, Mich. (Cummings, 1915). In Talladega, Alabama, there were 200 cases in 1907, and a number of cases were studied in New York City (1912-1913).

Lortat-Jacob and Deglaire (1919), reported a case in a robust young man. He had intense diffuse pruritus throughout the 3 weeks of the disease, and the urine contained bile-salts; bradycardia was present.

Kelly (1910) says it prevails especially during the summer months, and is most common in males between the ages of twenty and forty years, and seems to have a special predilection for butchers and soldiers.

Holz's patient was a woman aged 51 years. *Anders and Musser state that* butchers are most commonly affected, and that workers in ditches and sewers or those exposed to foul water are particularly prone to infection. They also state that most of the recorded cases occurred in males and during the summer months.

O. Minkowski (Cologne), refers to *Weil's* four cases of a peculiar disease running its course with "splenic tumor, jaundice and nephritis," which was characterized by a special febrile course with a tendency to relapses.

Diagnosis and Discussion

The French call this condition "typhus hepatique." Weil's or Fiedler's disease resembles the disease called bilious typhoid or typhus biliosus, described by Griesinger in Cairo and by Kartulis in Alexandria.

Leiblinger (1891) thought Weil's disease is a form of polyarthritis rheumatica complicated by an icterus from absorption—this view has not met with favor.

Quincke says the picture of this disease resembles typhoid fever more than any other infection. The disease begins suddenly, without any prodromota, with chills, fever and a rapid rise in temperature—the patient complaining of lassitude, vertigo, and headache and takes to bed. Stupor and delirium occur earlier than in typhoid fever. The tongue is coated, the spleen enlarged and occasionally diarrhea supervenes. *Jaundice* appears between the third and fifth day, rarely sooner. The jaundice rapidly increases in intensity, and the liver becomes enlarged.

Fiedler states the spleen and liver are not enlarged in all cases, and albuminuria may be slight or transitory. Usually the urine contains a moderate amount of albumin, a few hyaline casts and some red blood cells. The stools may become clay-colored if the icterus be very intense. The icterus may persist for 10 to 15 days and then gradually disappears. The total duration of the disease up to complete recovery is about 4 weeks. The patient may lose 15 to 25 pounds in weight during the febrile period. *Prognosis*—is usually favorable.

Salvaneschi analyzes the clinical findings in 276 cases of spirochete jaundice in troops of the advanced line.

The gall bladder was always enlarged and tender and the liver was usually much enlarged from the very beginning. The spirochetes seem to be found constantly in the urine. The spirochetes may gain entrance into the body through erosions, by means of food and water. Herrman believes the disease is transmitted chiefly by contact.

Vilá (Feb., 1919), Juul (March, 1919), Nicolaysen (1919), Dozzi, Otteraaen Ameuille, Willcox, Garnier and Reilly (July, 1920), Valassopoulo (June, 1920), Blumer (1923), Pick, Lesné, Reiter, Sartory, Herscher and Roberti (Nov. 12, 1920), Manteufel (April 28, 1921), Sobernheim, Fiessinger and Janet, Ryle, Hoffman, Basile and many others have written on this subject during the past 3 or 4 years.

Basile thinks the jaundice in these cases is the result of destruction of erythrocytes; the liver having little if anything to do with it.

The hemoglobin thus released by the toxic action of the spirochetes becomes transformed into bilirubin without the aid of the liver, while the liver, suffering from the action of the toxins as well as of the spirochetes, is unable to accomplish the elimination of the bile pigment.

Treatment.—Inada used serum from convalescents or an immune horse-serum, injecting from 40 to 60 c.c. with disappearance of the spirochetes from the blood in 24 hours. The diet should be fluid—broths, milk, tea, buttermilk, koumyss, etc.

The muscular pains may be relieved by local application, or hot stupes, and alcohol rubs and the use of allonal, adalin or adalin-luminal, etc.

There are no special remedies to be used. Salol, sodium salicylate, and aspirin have been advised by Allan Ramsey. Weil recommended the use of antipyrin for the severe muscular *pains* in the *calves of the legs* and elsewhere.

Essence of caroid, gastron, holadin, essence of pepsin, or elixir of secretogen may be used to settle the stomach and relieve the gastric symptoms.

Atophan, or cincophen may be tried for the relief of muscular pains, and luminal or bromides (Sedobrol)—for delirium and nervous symptoms.

CASE REPORT.

White man. Age, 77 years. Felt pretty well, except that during past 2 or 3 years had complained of "fullness and pressure" in the chest. Some dizziness. Had "spotted fever" in 1864; grippe, malaria (?), many years ago. Denies venereal disease. Shortness of breath and some "numbness" in arms and fingers for 3 years. Cramps in legs—and "heaviness" in chest. Had two sons. Wife had no miscarriages.

Examination made in November, 1921, showed no *cardiac* murmurs. Weak heart muscle. $\frac{S.\ 140}{D.\ 80}$ (auscultatory). All artificial teeth. Liver and spleen not enlarged. Double hernia. Telangiectatic lesions over chest and abdomen.

Blood Wassermann—Negative. *Reflexes*—Normal. Enlarged prostate.

Urine Analysis—Trace albumin; few casts; S. G. 1.028; trace of indican; few renal cells; *weight* 161¼ pounds.

Complained of having had "ten attacks" of severe pain over heart during past 4 or 5 days (*angina pectoris*).

November 19, 1921:

Phenolsulphomphthalein Output—20% first hour, 25% second hour; 45% total for 2 hours.

Urine Analysis—2% sugar; trace of albumin; few casts; no acetone; trace of indican; S. G. 1.032; acid.

Blood Sugar—183 mgms. sugar in 100 c.c. blood.

December 5, 1921:

Blood Sugar—110 mgm. per 100 c.c. blood.

December 10, 1921:

Urine Analysis—Acid; 1.014 S. G., urea 1.3%,—6.5 grs. per fl. oz., few hyaline casts (medium width—25 to an ounce); trace of albumin; no sugar.

Dec. 12, 1921:

Blood Wassermann—Negative.

Blood Pressure: $\frac{S.\ 140}{D.\ 70}$ (auscultatory).

PRESENT ATTACK—December, 1921:

The patient suddenly developed *pains* in the abdomen, with *chills* and *fever*. Pains in the legs, particularly in the calves of both legs, were quite severe.

JAUNDICE appeared in a few days and persisted for 8 or 10 days. The *stools* were clay colored for several days.

There was consdierable *tenderness* over the *gall-bladder* and region of the *pancreas*.

The urine and blood failed to show the specific microorganism of TRUE *"Weil's (spirochetal) jaundice."*

The appearance of the patient, the symptoms,—the PECULIAR FEVER, and the recovery of the patient excluded cholelithiasis, malignancy, pancreatitis, and ordinary catarrhal cholangitis or cholecystitis.

Typhoid fever was easily ruled out—by the negative *Widal* tests and blood *cultures*.

The case, clinically, fitted in well with *Weil's Disease* (acute infectious jaundice).

Blood—W. B. C. 9000.

Blood Chemistry—Sugar 166 mgm.; urea 15 mgm.; creatinine 1.5 mgm.

Urine Analyses—Showed few casts, and traces of albumin.

The *spleen* and *liver* were both somewhat enlargd (palpably). The patient was quite ill during January and February, 1922. For a man aged 77 years he did *remarkably well*. *Gastro-duodenal* studies were refused.

(Concluded on page 240)

Poise Between Structures and Energies as a Basis for Repair—II

With Special Reference to Motor Re-Education in the Mature Adult

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How to Acquire Full Relaxation, Physical and Mental Poise. First Secure Motor Control in the Negative Phase and Then of the Organism as a Whole (Also See Appendix).

The muscles possess a consciousness of their own, also a special sensory equipment. Both must be reckoned with in solving many clinical problems.

By retraining is meant revision and redirection of disordered muscle action aiming to equalize contraction or tension, to ecomonize motivation and restore parts to positions of advantage; also to flood a weakened or bewildered muscle with "vim" or confident purpose as well as blood. A normal muscle is always ready for action, and only needs clear self direction and objective.

Through muscle re-education it is possible not only to recover lost or impaired muscle function and nutrition, but also to furnish defense and repair resources for psychomotor equilibration.

Let me cite as illustration the repair of those conditions which I have called psychic-hypertension.[3]

All persons are subject to variations in powers of self-direction and control; to ups and downs of energy, of impulse, of emotion, of determination, of judgment, of nutrition and of actuation. Risings or lowerings of capacities are thus shown, of feelings, of conscious or unconscious changes which occur from day to day, often from hour to hour. Some exhibit large fluctuations of energy but only at long intervals. Occasionally depths of gloom are reached. These moods, or aberrances of feeling tone, occur and recur, or remain obscured. During tangential flights of force, or lapses from control, character changes, the sense of proportion is lost, standards of conduct or decision are obscured or fade away, instinctive defenses, inhibitions evaporate.

Oscillations are peculiar to the realm of feeling, usually dependent on changes in the body cells, modified by accidental factors in environment, by dominating stimuli from without or within, by changed conditions of health, of weakness, of disease, of feelings of adequacy or inadequacy.

Determinants of conduct are moods, emotions, feeling-tones. They in turn influence beliefs and likewise somatic states. The most forceful, the most prevalent modifier of decision, is some form or degree of fear (or rather dread) of anxiety or apprehension. Then do cells, tissues, secretions, and above all, centers become affected unfavorably, oftentimes seriously, and organic damage or cellular destruction may result.

The powers of ideation, of reasoning, and choice, thus become limited; those of indirect, accidental influences, tremendous. Even faith must not be too blind or misleading. Hurtful habits of mind and body evolve chiefly from indecisions, apprehensions, doubt, seldom from over-confidence or aggressiveness. Few of those who seek or need medical advice are free from some degree or form of anxiety neurosis. Only in the acute diseases can we feel confident that this feature is absent; even here it may and does occur modifying defense processes.

[3] See article by author: "Psychic Hypertension. Restoration of Mind Control by Motor Training in Relaxation", International Clinics, Vol. II, Series 22.

The causes of psychogenic over-tension states are many. A crude classification may be those due to: (1) over-sensitiveness to emotional influences, and (2) faulty habits formed or anxieties acquired during early training processes; (3) the dread of not fulfilling one's expectation of one's self at a crisis.

The factors include variations in feeling-tides beyond normal or customary limits, in intensity, in periodicity, in clear differentiation, also in commotions of somatic processes, in unusual reactions to stimuli, in aberrant impressions from without or from within. Some element of dread or apprehension of failure is always present, often coupled with heroic repression or endurance. Through eccentricities of reaction the emotions are thrown just a little out of gear, inducing disproportion in psychomotion.

Attention is tension in nerve-cells. Neurons which at any time furnish a physical basis for varying attention are subject to a thrill or vibration or quivering; hence stressful tension. There is also voluntary or involuntary, or reflex, attention. Reflex attention is forced upon the consciousness by external stimuli. These react upon visual, auditory, olfactory, or tactile or visceral centers and compel attention against the will.

Voluntary attention is correlated with heightened activity in cortical brain areas. Anxieties increase morbid hypersensitiveness and the whole makes for agitation, dread, even turmoil, in motor spheres. Tense voluntary attention, long continued, will weary the strongest body and brain. Protracted over-stimulation induces exhaustion in brain cells, till they shrink and become impaired. Muscular energy is so closely associated with the integrity of motor neurons that all influences affecting them become of extreme significance, whether bearing upon mental or physical competency. Psychic hypertension is a manifestation of habitually over-stressed attention. There is present at all times more or less of physical strain, leading to pertubation in volition, to unhinging of capabilities.

It is well known that attention strongly, continuously and anxiously, directed to any organ will induce functional disturbances; consciousness becomes dulled by repeated responses to, or irregularities in, stimulation. Hence awareness falls below the threshold. There remains, however, the effect of perturbation; viz., arythmias persisting and manifested in the motor machinery. Frequently exhibited is the state here called psychic-hypertension. On the other hand hopeful concentrated attention, rightly directed and interpreted, will go far toward repair of any function or even of structure.

Sensations incite to action and in terms of the original capacity and the subsequent habituation of motor paths and centers. Unless proper association fibers in the brain become developed by suitable nutrition, orderly adjustment and right training, there must result both motor and sensory, and hence psychogenic, limitations or depression. Sensation tends always to pass into movement. If there be no motor image there will be no concept, and no concept can be formed without an accompanying motor outflow.

A reflex movement in neurons lies at the basis of every higher act of volition. The idea of an act tends to translate itself into movement. The consciousness may form a concept of the consequences of the act and check it. This secondary idea may suggest a modification of the act, or an opposite one. That which modifies the will is oftenest dread or anxiety. Fatigue may inhibit; nothing is so exhausting as long-protracted attention. Doubt, indecision, waste motion (or energy) is thus induced. Exhaustion follows.

To analyze a suppressed complex is the first step toward its solution. The next is carefully to trace out the primary steps of advance, to go over the ground from the beginning. After determining what now is the next step is to show how future advances can be made without committing former errors. This involves instruction in right motor habit formation.

Right habit formation is based on right guidance in motor impulse, and is essential to right thinking. New paths must be plowed out in motor soil, old paths revised. Thus facility is restored and enhanced. Nor should any habit be permitted to become too fixed. Capacity for variation is priceless; thus new and shorter routes can be traveled in the brain and centers. When this capability is gone, then is the organism a derelict indeed.

It will be plain that psychic-hypertension is closely associated with anxiety neurosis and with unconscious muscular hypertension.

The desideratum is to achieve balance between determination and execution. A large proportion of the benefits derivable from any kind of graded motor training depends, for its chief efficacy, upon tranquilizing effects on any mental turmoil. Exercise is almost universally conceived to be strenuous muscle making, which, valuable as it often is, may readily exhaust or harm, especially when not wisely directed or modified.

The reparative potency of exercise is popularly viewed with extensive misconception; sometimes with over-enthusiasm, and often with ridiculous and reasonless condemnation. The aspect of reparative exercise here considered is the power of poised movement to induce the condition, and, above all the habit, of tranquility, calmness, equipoise, in order to alleviate fatiguability, to rehabilitate energy, to encourage an output of force just enough to accomplish self-control; to attain that position of advantage from which all latent forces may economically proceed to highest achievement consonant with endowments.

What, then, are the best measures for securing that motor equipoise so essential to mental serenity, hence for all-round efficiency?

Briefly, intelligent direction is needed in *forming habits of periodic complete relaxation, by alternations of definite, simple, primitive motor energizing, with insistence on equally clear-cut periods of absolute rest,* a stilling of the mind and cellular consciousness.

When the first steps of mind control are established, then one can proceed to more complicated purposeful acts, with intervals of repose. Ultimately, as progress in peacefulness warrants, there should be taught the performance of motor acts making for vigor and effectiveness.

A brief sketch is offered later of procedures to be followed in teaching mind control or the mastery of relaxation. The first thing is to induce quiet, a receptive attitude. For this a recumbent position is best, or an easy chair, the eyes closed, to dissociate the subject from all sources of external irritation, a withdrawal from the life of relationships. Next, full, candid explanation should be made of the objects to be attained; the value of routine or ritual; the fact that responsibility rests wholly with the subject, the seeker for help, the self alone. Outside help contributes, but only by pointing the way, by affording the benefits of broader thought, of principles of action learned through experiences.

The subject must be *made aware also of the vast unused energies latent in each;* greater than are needed or ever rendered available, which can be drawn upon confidently. The mines of force being inexhaustible, success is merely a question of getting out the materials and adapting them to use.[4]

Summary.

The muscles being the dominant components of the body framework, and their actions, movements and support forming the main (gross) contribution to the resultants of the laws of bio-physics as a whole, and as manifested in the noble organs, it follows that the more harmonious, balanced, hence economic action and interaction of the muscles can be achieved, the more completely will the body processes be sustained, encouraged and fulfilled. The mental processes are inseparable and must co-operate always.

The significance of this conception of biologic truth in respect to the welfare of the body and mind in health, obtains equally in the enterprise of reacquiring health. Hence the most important or radical or practical step in repair includes the revision, readjustment and re-education of the muscles and becomes the primary consideration in the enterprise of rehabilitation.

The human body being an aggregation or congeries of bio-mechanisms, and as they necessarily conform to the laws of bio-physics, the chief objective is the maintenance of equilibrium or of stability among the changeable parts, factors, control and directing forces of bio-motivation, and:

The muscles constituting as they do not alone the gross transmuters, transformers, transmitters of force, but likewise contributing to the bio-chemical, enzymatic and other finer processes, functions, attributes or defense or growth and repair forces, they deserve the utmost expert conservation and guidance in automatic as well as in conscious control.

Forces exerted from within or from without can be most economically regulated and applied through and by the nice adjustment of the muscles.

The absolute essential of automatic adjustibility is integrity of the neuro-muscular mechanisms and this can only be attained and maintained by re-education whenever and wherever they are found to be not in proper condition to perform their appointed tasks.

Re-education of muscles must, or should, embrace all those procedures which co-operate to produce and sustain equilibrium of kinetics as well as akinetics, actuation and inhibition, work and rest, expenditure of energy and recuperation.

Hence in the scheme of muscle re-education, training in relaxation comes first, in order to achieve the zero point, the position of advantage from which to apply purpose, volition. When the relaxation obtains throughout it constitutes a negative phase of tranquilization, and is most important for the welfare of not only the body but the mind, the emotions, and the feelings.

It is only through the performance, accurately and repeatedly, of all the primitive movements in accord with design that we can be sure of gaining that self-mastery so essential to well being and well getting.

While it is true that some individuals seem so wonderfully endowed as to be able to exist in comfort with

[4] For details of this "Ceremonial of Relaxation" see Appendix.

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Treatment of Tuberculosis by Artificial Pneumothorax

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C. Farlanini of Pavia, was the first to introduce pneumothorax in 1894, but independently of Faranini, John B. Murphy of Chicago made use of it in 1898. No general attention was paid by the medical profession to this mode of treatment until Bauer, Spengler and others took it up in Germany where at present this method is particularly in vogue.

Fischberg remarks "that it is a valuable method of treatment will be appreciated when it is borne in mind that it is mostly indicated in cases in which everything else has been tried and found wanting." The principle underlying artificial pneumothorax is to immobilize the affected lung so as to imitate Nature's mode of cure. In early cases we may hope to have only a mild febrile affection which is the ideal stage at which to do an artificial pneumothorax. To reserve pneumothorax for those cases "in which everything else has been tried and found wanting," that is, cases of progressive type in which both sides are usually involved, means just the type of cases, in which artifical pneumothorax is contra-indicated.

Dr. Henius advocates artificial pneumothorax only in the early stages, and in my own limited observations on a series of fifty cases of artificial pneumothorax, I found, that it is the early type which lends itself most effectively to this form of treatment. Pottenger, while advocating pneumothorax for all, lays particular stress on its value in early cases.

Indications for pneumothorax:

1. Every one-sided tuberculosis, where the apex and one lobe are affected.

2. All one-sided cases in which the other side, while slightly affected presents a chronic, nonprogressive type of the disease.

3. Acute destructive tuberculosis with cicatrization.

4. Cases of the type described by Fischberg where "everything else was tried and found wanting." In these cases a pneumothorox may be induced on the side that is most affected but it must be done by one of wide experience and possessed of great knowledge of the pathology and symptomotology of tuberculosis.

5. Dry pleurisy, with pains, where a little air—about 200 c.c.—will relieve the pain by separating the pleura.

6. Pleurisy with serous effusion: about 100 c.c. of air being put in, and the thorax fluoroscoped; if the exudate assumes a straight line, there are evidently no adhesions and the fluid is then aspirated and a pneumothorax done.

7. In pneumopericarditis which gives severe pain a little air will relieve the condition.

Artificial pneumothorax is sometimes undertaken for diagnostic purposes, and in suspected pulmonary tumors a pneumothorax will collapse the lung around the tumor, thus outlining it very sharply.

The contra-indications for inducing pneumothorax are:

1. Intestinal tuberculosis.
2. Diabetes.
3. Heart disease (though a tubercular heart may not always be a contra-indication).
4. All cases having severe complications.

The complications in pneumothorax are:

1. Air embolus.
2. Serous pleuritis.
3. Emphysema of the skin and mediastinum.

Technic: The patient must be thoroughly examined both roentgenologically and fluoroscopically, and reassured that the operation is a painless one. It is wise to explain the procedure to an intelligent patient, for he soon realizes that he is to gain a great deal by this operation, so that he becomes anxious for it and submits to it with good will. Once he understands that the success of the operation depends upon his cooperation and feels that he may himself be to blame if it fails he will become docile and submit to the procedure without a murmur. He must be instructed not to cough throughout the entire time of the operation, and also for some time afterward, and it is remarkable how those with hacking and incessant coughs, when the danger of coughing is explained, will cease coughing during and after the operation. In many cases of my own and those of others that I watched, no patient ever disobeyed the injunction not to cough.

In cases where the X-ray and fluoroscope show no adhesions, the place of puncture is usually in the fifth or sixth intercostal space, between the anterior and posterior axillary lines. In cases with adhesions, one must be guided by the findings of percussion. The air can be injected in any place where the needle is able to enter the pleural cavity, though on the left side, care must be taken not to puncture the heart. The place of puncture including the pleura, must be thoroughly anesthetized, the anesthesia being done with a two per cent solution of novacain. The room in which the operation is performed must be well heated and all appliances must be warm. Iodin is used as antiseptic. In Germany the Henius needle is largely used; this is quite a thick needle, about two and one-half inches long, with a cuff at the head so that the fingers do not come in contact with that portion of the needle which goes into the chest. Attached to the tubing is a hollow obturator which is drawn into the needle when the puncture is done. As soon as the pleura is punctured, the obturator is pushed down, the monometer showing by the negative pressure whether the pleural cavity has been entered, as the fluid will press in the direction of the needle.

The patient is then told to breathe, and if the needle is in the pleural cavity, there will be violent oscillations of the fluid in the monometer. Sometimes the needle strikes bands of adhesions, and it becomes necessary to select another place for the puncture.

Ordinary air is now being very generally injected. The inital injection should be between 200 and 300 c.c. of air, though some patients can safely receive a great deal more than others. The patient is instructed to sell when he feels the pressure, and he usually tells in time. At the beginning a filling is done every three days; later on, every week or two; and still later, the procedure is carried out only every two or three months. At this stage the patient is usually able to go about his business. When in Berlin I knew a number of army officers who had contracted tuberculosis during the war. They would report every two months for a filling and in the interim they led a very active army life. After an artificial pneumothorax, the patient should rest for a few hours, although I have seen scores of them coming for a filling and going about their business immediately afterward. I observed numerous cases in which pneumothorax had been done and I myself performed it on fifty individuals,

(Concluded on page 237)

Polluted Water and High Death Rates

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Pittsburg is a town in California, of several thousand people, on the Sacramento River, close by the junction of its confluences. San Joaquin River. Like other river towns it takes its water supply from the coffee-colored stream of which it is an important landing station; and inasmuch as the Sacramento River is the sewer for many towns aggregating several hundred thousands of population, it stands to reason that purification of the water is foremost among the necessities of healthful living. Like other towns, precipitation of the suspended matter—almost wholly mud and sewage is practiced in the municipal water works and chlorination is the final step before the water is let loose into the city mains. At least it is supposed to be chlorinated in order to destroy the micro-organisms usually present in water contaminated by sewage.

In 1920 an epidemic of typhoid broke out in Pittsburg, and about 150 people were stricken. Investigation by the authorities disclosed the fact that the chlorine supply had given out and that the operatives in charge, either knowing or not knowing, had pumped unsterilized water into the mains until a very great part of the town had consumed contaminated water. Hence the epidemic of typhoid.

Perhaps the matter would not have become one of notoriety had not several of the victims made a common cause and brought suit against the municipality. Damages aggregating over $30,000 were awarded to the plaintiffs and a number of cases remain to be tried. It is not likely that every victim of negligence survived the disease; certainly the negligence might be regarded as a cause for criminal as well as for civil action. It is a common saying that a municipality gets the administrative government it deserves, but not always one that it needs: but on the whole this case seems to be one for the district attorney, for a homicide due to such a cause is more than carelessness; and contributory negligence can hardly be charged against the people. Pumping unsterilized water into city mains is comparable to putting wood alcohol into a prescription.

An inspection of the death rates of municipalities using river water ought to set the people a-thinking. Here are some statistics, the death rates per 1000 of population being for 1922: Albany, 15.7; Bridgton, N. J., 17.8; Cairo, Ill., 17.0; Eugene, Ogn., 20.0; Glen Falls, N. Y., 17.9; Greenville, Miss., 27.1; Hackensack, N. J., 19.1; Hudson, N. Y., 17.2; Kingston, N. Y., 19.1; Newburgh, N. Y., 15.9; Troy, N. Y., 18 0 Compare the foregoing figures with those of, say, Akron, Ohio, 7.5; Bethlehem, Pa., 8.3; Bloomfield, N. J., 7.3; East Orange, N. J., 6.9; Gary, Ind., 9.8; Garfield, N. J., 6.6; Harrison, N. J., 8.3; Montclair, N. J., 7.6; Naugatuck, Conn., 6.7; Rock Island, Ill., 9.0; and West New York, N. J., 5.8; figures of the latter are less than one half of those of the former. One cannot say positively that, in the cities of the first list, the high death rate is due to imperfectly treated drinking water; nor can it be claimed that the low rates in the second are due positively to more wholesome water. But when we eliminate the factors of advanced age and epidemic outbreaks, the suspicion of poluted water becomes pretty strong. This, however, is not a matter to be taken for granted; it is one that demands a searching investigation.

There are interesting comparisons to be considered. Thus, Cohoes and Troy are manufacturing communities only a few miles apart, on Hudson River. Probably they take their water supplies from different sources, but the difference in their death rates is practically five lives per year for each thousand of population in Troy. In other words, a life a day is the price which Troy pays for a cause unknown but suspected, and yet preventable; and were its rate lowered to that of the adjoining community of Rensselaer, there would be a yearly saving of 450 lives. In 1922 the death rate of Yonkers was 10.7; for the same year in Newburg it was 15.9. They are similarly situated on Hudson River as to flood plain and bluffs. Yonkers is a congested manufacturing center; Newburg, is a residential community. The conditions of situation are about the same but the difference in death rates is one of tremendous importance. Phillipsburg and Port Jervis are on Delaware River, a few miles apart. In 1922 the death rate of Phillipsburg was 9.4; that of Port Jervis was 17.4. Is the problem of such enormous differences worth studying? If the difference applied only to a single year one might concede that it was an isolated instance; but in nearly every case noted the difference is persistent; and when one compares it with the rate of the whole registration area of the United States, 11.9 per thousand of population, the excess of deaths over the average is a problem worth studying.

It is claimed by various authorities that jungle methods with their high rates of mortality produce a stronger race, because of the higher resistance of the survivors. This aspect of the problem is not without truth; but civilized society has rejected the jungle system for one seemingly better, but yet of doubtful value; and it is up to society to give the methods of civilization the maximum of a fair test. But the foregoing figures show that society is yet a long way from the maximum of efficiency in the saving of lives. A study of the death rates of the registration area shows that a very large proportion of the cities having high death rates take their community water supplies from rivers which are general sewers. In a lesser proportion there are cities having efficient systems of water purification whose death rates are low. The conclusion that the high death rates are due to polluted water is both natural and strong. Either it is a fact or it is not a fact—aliquid est demonstrandum.

Roentgenography of the Urinary Tract During the Excretion of Sodium Iodid

Earl D. Osborne, Charles G. Sutherland, Albert J. Scholl, Jr., and Leonard G. Rowntree, Rochester, Minn., describe a method by means of which it is possible to obtain roentgenograms of the urinary trace during the excretion of sodium iodid following its intravenous or oral administration. The method uniformly gives excellent and accurate shadows of the urinary bladder and renders reliable information relative to its size, shape and location. It has been partially successful in depicting the renal pelves and the ureters in a limited number of cases. In a number of cases it assist in revealing the kidney itself through intensifying the renal shadow. It has been proved a success in revealing the existence of residual urine in the bladder and in furnishing approximate information of the amount, thus eliminating the necessity of catheterization and its attendant dangers of infection. Oral administration of the drug will prove satisfactory for routine use in making roentgenograms of the bladder, while for shadows of the ureters and kidneys intravenous injection of large doses of sodium iodid are desirable.—(*J. A. M. A.*)

THE TREATMENT OF DIARRHEAL CONDITIONS IN CHILDHOOD

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In the treatment of diarrheal conditions in infancy and early childhood, two things must be established before therapeutic measures are instituted.

First: What is the state of nutrition of the patient, and, Second: What part of the intestinal canal is involved. This much is essential, for upon its determination not only does the treatment depend, but also the prognosis.

In the main, diarrheal conditions etiologically, may be either alimentary or infectious, the latter, either enteral or parenteral (75% of the infections cause dyspeptic disturbances). In all hypotrophic nutritional conditions with diarrhea, it is essential to remedy the intestinal disturbance before making efforts to improve the nutritional status. If the diarrhea is alimentary treatment is always indicated, but if it is infectious in etiology, treatment for the diarrhea is only indicated where there is a serious loss of weight, in which event there is fermentation in both small and large intestines.

The diarrheal condition may be caused by the involvement of the large or small intestine, or by both. Diarrhea due to fermentation in the large intestine is, per se, harmless. The weight is stationary, or there may even be a steady gain. In such cases the nourishment given should not be decreased, and such articles of food be added to the diet that do not increase the fermentation. This is accomplished by the addition of some protein preparation to the regular feeding, as eiweiss milch containing 3% dextri-maltose, 5%, or larosan, 2%. Equally satisfactory is the addition of 2% of milk powder to each feeding. Buttermehl Czerny or Buttermilk, with an addition of 3-5% dextri-maltose, may be substituted in part for the regular feedings. The caloric requirement in these cases is 160 per kilo of body weight, as 50 calories are lost by the diarrheal movements.

Diarrhea due to fermentation in the small intestine is of a much more serious moment. It is due to an ascending bacterial action originating in the large intestine. There is a production of acid products, amino acids, and other protein split products, with absorption, resulting in fever and other toxic symptoms, with loss of weight. In these cases, the food should be reduced in amount and frequency. Here the starvation treatment is indicated, the duration of which is to be reduced to a minimum in hyponutritional states. To starve an atrophic child more than a few hours would so aggravate the inanition present as to endanger the child's eventual recovery, and even at that diarrhea in atrophy is generally fatal. In eutrophy,* hunger can safely be continued for 24 hours, in dystrophy 10 hours, and in atrophy but 8 hours. During the starvation period, boiled water, weak tea, and barley water may be given. At the termination of the hunger period, in a eutrophic child, the quantity of the regular food should be reduced one-third, and the milk given should be diluted with an equal amount of boiled water and 2% eiweiss milch containing 3% dextri-maltose, or 2% larosan added. The quantity of food should be increased every second day by 100 grams, and on the ninth day, the full diet can be restored.

In dystrophy and severe small intestinal diarrhea occurring in eutrophy, following the preliminary hunger treatment, buttermilk containing 3% dextri-maltose should be given instead of the milk mixture, in gradually increasing quantities, beginning with 300 grams daily and increasing every second day by 100 grams, and eventually adding fat in the form of butter, beginning with 1% and gradually increasing up to 3%. In a few days the percentage of dextri-maltose can be increased to 5%. Eiweiss milch may be substituted for the buttermilk, given in the same amount and manner and containing 5% dextri-maltose, irrespective of the age of the patient, and irrespective of the condition of stools.

In diarrheal conditions occurring in atrophy, the treatment is similar, but here especially should the eiweiss milch contain 5% of dextri-maltose, to heighten the caloric value of the food. Later, when the diarrhea has subsided, the sugar may be increased even up to 10%, or buttermehl with five times its volume of buttermilk may be given, in increasing amounts, every second day. In certain cases it may be advisable to give undiluted breast milk instead of the other forms of food, in similar amounts and manner.

In hypotrophic conditions carbohydrate additions should always be made to prevent excessive loss of weight. In general, in dyspeptic conditions, the amount of food in the beginning should be 300 grams per day and increased every other day 100 grams.

In chronic diarrheal conditions the essence of the treatment is the same. Best results, however, are obtained with eiweiss milch which should, however, not be used longer than six weeks, at the end of which time the regular diet should be gradually resumed. Here also is the protein milk not to be given without the addition of carbohydrates, even when mixed with cow's milk. The use of buttermehl is not advisable because of the high fat and carbohydrate content, which would further increase the fermentation.

Conclusions

In diarrheal conditions, preparatory to the treatment, it is necessary to determine the nutritional status of the patient and the seat of the fermentation. Prognosis and treatment depend upon the findings.

Diarrhea of large intestinal origin requires no reduction in the food and no special therapeutic measures. Diarrhea of small intestinal origin requires energetic treatment beginning with a hunger period.

In all forms of diarrhea eiweiss milch in some form is beneficial.

Eiweiss milch should never be used without the addition of a carbohydrate.

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* Eutrophy is the normal nutritional state, dystrophy and atrophy are the grades of malnutrition.

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at no time seeing any serious complications as a result of the operation. The worst that ever happened was emphysema of the skin, which cleared up in a few days. In inducing pneumothorax there must always be complete fluoroscopic and roentgenologic control.

In connection with this, I wish to mention the good work that is being done in Germany in thoracoscopy, as advocated by Prof. Jacobaeus, who used thorascosopy for severing strands and bands of adhesions in tuberculosis. The Germans do all this, but go a step further, cauterizing lesions in the lungs, and actually using local applications for the purpose of stimulating the formation of fibrous tissue and cicatrization. The work in this field is as yet very recent and experimental, but I think it promises to become a very great factor in the treatment of tuberculosis.

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ON REMOVING ADENOIDS

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In the usual way that adenoids are removed, there is every likelihood that some of the tissue will remain, unless one takes certain precautions. Before the child is sent to the hospital for a tonsil and adenoid operation, an examination of the naso-pharynx should be made, either by inserting the finger behind the soft palate, or by using the pharyngoscope. Sometimes, it may be more advisible not to examine this part, (when one feels sure that there is adenoid tissue present), if the tonsils are to be removed anyway, for the examination can more readily be made under anesthesia without any distress to the child.

Under no circumstances should an attempt be made to remove the adenoid with a curette or any other instrument, until one has examined the nasopharynx carefully by palpating with the index finger. The value of this procedure lies not only in determining the size of the adenoid, which is very important, but it will also allow one to note the consistency of the adenoid and its location. Frequently, if one uses a curette strenuously without making this examination, he may strip down some of the nasopharyngeal wall, leaving a pocket which eventually will result in scar tissue, or else infection may take place and the patient suffer from torticollis for some little time after.

It is surprising to see how inaccurately the curette is used in most instances. In the first place, one should select a curette that has a sharp edge and with the proper bend. One will often do much better work with a small curette than a large one, unless the adenoid happens to be a large organized mass, which hangs freely from the vault of the pharynx and which can be engaged in the fenestrum of the large curette. Taking adenoid tissue away in haphazard manner will result in a great deal of harm, either because some tissue is left or because a raw surface remains which heals up slowly.

Within recent years, the author, in the majority of instances, has been satisfied that he gets better results from the use of a very small curette, with an opening of about three-eighths of an inch in diameter. With this small masses of adenoid which hang from the vault of the pharynx or are in the fossa of Rosemuller, can easily be removed, particularly if the finger of the opposite hand follows the blade of the instrument as it is cutting through the tissue.

A great many men make use of a specially devised adenotome, such as the La Force instrument, or an adenoid forceps. There is no doubt that a great deal of adenoid tissue can be removed with such an instrument as the former but the possibility is that a small fringe of tissue will still remain in the vault of the pharynx which, no doubt, will increase in size, forming another growth. In order to obviate this, one may wrap a piece of gauze around the index finger, and thoroughly scrape out the vault of the pharynx with the finger thus protected. A forceps must be used with the greatest care, for in order to bring the forceps forward and the blades together to cut the adenoid tissue, one may very possibly engage the posterior portion of the septum thus fracturing it and bringing parts of it away. The utmost care should always be used under any circumstances.

In regard to the bleeding from the nasopharynx after the removal of adenoids, one need not be seriously alarmed even where there is free bleeding, provided the coagulation time of the patient has been found within normal limits. Moreover, if the tonsils have been removed at the same time, and it is seen that the capillary oozing from the raw surfaces stops in a short time, one may be satisfied that the same thing will happen in the vault of the pharynx.

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THE VALUE OF LIFE EXTENSION

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I have been interested in the very able and elaborate article by Eugene L. Fisk, M.D., in the MEDICAL TIMES on "Extending the Health Span of Life after forty." Dr. Fisk would seem to doubt the advantage of extending many lives after forty. Be that as it may. The question is what per cent of those lives extended would it be a blessing to the individuals or would the world be in any way benefited.

> "Yet they who fall in fortune's strife,
> These fates you may not censure;
> For still the important ends of life,
> They equally may answer."

Who knows?

The thought of the physician is to save life—to prevent death. It is safe to say that ninety-nine percent of the human race wish to live. Few wish to die at any age or condition of health. They would postpone the event. I have practiced medicine for many years and state my experience. Like Cecil Rhodes of South Africa, when dying said "so much to do and so little done."

> How few exclaim in their distress
> "I court, I beg Thy friendly aid,
> To close this scene of care."

But Dr. Fisk would extend the health span of life after forty. In many cases forty is too late—too late. Science-hygiene and sanitation have done much to prolong life, so Dr. Fisk says "probably 20 years more than it was a century ago." The gain "has been largely in early life." At thirty man suspect himself a fool:

> Knows it a forty and reforms his plan";
> "Resolves and re-resolves: then dies the same."

Shakespeare revealed his knowledge of the matter when he made old Adam say to Orlando:

> "Let me be your servant,
> Though I look old, I am strong and lusty,
> For in my youth I never did apply
> Hot and rebellious liquors to my blood
> Nor did not with unbashful forehead woo,
> The means of weakness and debility;
> Therefore my age is as a lusty winter,
> Frosty but kindly."

Again when Gloster asked Hastings, "what news abroad," Hastings says:

> "No news abroad so bad as news at home,
> The King is sickly, weak and melancholy,
> And his physicians fear him mightily."
> Gloster, "Now, by Saint Paul, that news is bad indeed,
> Oh, he hath kept an evil diet long,
> And over much consumed his royal person."

There are several reasons why extending health-span after forty is too late in many cases. Heredity, extravagance in eating, in use of coffee, in tobacco, in alcohol, etc. Why expect the children of those who indulge for years in alcohol or the luxurious lives or the syphilitic, etc., to live after forty.

> "Oh! may heaven their simple lives prevent
> From luxury's contagion weak and vile."

2440 Washington St.

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the minimum expenditure of movement energy, the tendency is for them to suffer diverse disuse cripplings and the effects of perilous stagnation.

Appendix.

A Practical Means or Ceremonial for Securing Complete Relaxation of Body Also Serenity of Mind.

Outline of a method devised and used by me for achieving self-mastery and the state and habit of relaxation, is submitted. This has served many patients well for years. By this ceremonial anyone can promptly and completely release nervous over-tension, renew energies and be made ready for a new start, refreshed and in the best position of advantage for further effort.

The procedures should be first taught while lying on the back. When learned an easy chair may be used, a pillow to support the head, the feet on another chair, or it can be practiced alone, anywhere. Time consumed about eight or ten minutes.

Undivided attention should be urged to the matter in hand. The purpose is to withdraw all sub-tension from the mechanisms, put the body to sleep, the mind remaining awake. The condition produced is similar to Boris Sidis' "hypnoidal state, or Weir Mitchell's "pre" and "post dormitial state" and serves well for implanting suggestions.

It should be made clear that the object is to secure full conscious mastery of the whole muscular system, but only in the negative or resting phase, of the same degree of passive control as that exerted for active control. This impresses the subject as a novelty and, while not easy to learn, is particularly well worth while.

In order to fix attention on an indifferent matter and secure diversion from distractions caused by the life of relationships to direct the patient to breathe a little deeper and slower than customary is helpful.

The body may be graphically divided as of six parts: the four limbs, the trunk and the back of the neck. These parts, the limbs to begin with, are described as all belonging to the possessor, and while designed to serve varied active or automatic purposes are, as a rule, controlled consciously in the active phase only, through a push, a pull, a turn, etc. The directions now given are that these parts shall be ordered to obey but merely by making no motion whatsoever, to lie perfectly still and —if moved by someone else—to show no consciousness, to remain at complete ease, with no resistance or sub-tension.

I then make clear and emphatic why it is so desirable to practice the act of breathing; that consciousness of rhythm encourages a poising in every cell and fluid and impulse, "a getting hold of one's self" and to retain that hold under all exigencies.

The patient is then told to breathe steadily five times during which the right arm is lifted, pulled, bent, turned, etc., in order to detect whether any subtension persists. Some persons relax promptly, others need several lessons. Then after breathing five times the left arm is raised, moved, by the operator. After five more breaths the right leg and then the left leg is treated handled and suggested in the same way.

Again, after five breaths the abdomen is approached; explanations are given of the actions of the tubular viscera, peristalsis, etc., how they can be made to work better when the will is directed to them; also to the hollow or globular viscera. Placing a hand over the abdominal viscera, one can note any flatulence, gaseous distension, which can be made to disappear. I explain the rationale of borborygmi, spasm in one area and relaxation in another and the gas rushing through the narrowed spastic opening, and show as this can be overcome, tranquility then follows.

The neck is then approached. It is explained that all persons in a state of nervousness or sub-apprehension howsoever mild, show some over-tension in the neck muscles, including the posterior occipital and scalp muscles. These last are often also rigid, adherent and, when these are released, many distresses and sensations of anxiety subside. Then the head is taken in hand, rolled back and forth, bent to one or other side, till the neck muscles become quite relaxed.

Finally I congratulate the patient on the degree of self-mastery achieved, and promise it will become greater "day by day in every way." Then he or she is urged to lie perfectly quiet for a period of rest; time: ten to thirty minutes.

During this ritual—while in this hypnoidal state—I implant the more important or needful explanations, recommendations, repeating some each day and devising others to meet conditions as they emerge.

An interesting and graphic, or rather auditory, demonstration of hyper-tension I devised, is to ask the patient to place one ear against a muscle mass in my arm; to note that when passive no sound is heard. Then I gradually tense the muscles to the utmost. There will be heard, or felt, certainly perceived, a vibration in these muscles as they contract, very like a fiddle string. This —it is explained—is the constant state of one suffering from psychic hyper-tension. Energy loss thus becomes prodigal, like from a badly insulated wire.

A valuable method of securing ease, relief to many distressing effects of sub-tension in the structures of the back, the hips and neck, many of which are due to localized spastic states, a tonic protective spasm, is the following:

The patient lies prone, chest down, head on the upper edge of a low pillow, and turned to one side. The physician presses gently down all over the back from neck to hips a few times, noting the states of rigidity. Then he directs that the head shall be lifted, bending gradually backward, supported by the arms, and to "look at the ceiling." Lying down again and repeat twice. Again the down pressures over the back, then direct to lift one leg and push out (extend) the heel with increasing force, then lift the other leg and push out heel. Repeat three or four times.

This series of procedures may all be repeated two or three times. After each occasion the physician will note a marked lessening of the sub-tension of the back muscles, especially the more rigid ones. Also a great sense of relief follows; of invigoration and of various forms of comfort, one of which is absorption of intestinal flatus.

Let me emphasize the really great pwer of this release of contracture and its wide applicability. Later a communication will be offered entitled: "Imbalance Between Structure and Governing Energies. Clinical Groupings from the Standpoint of Physical Therapeutics or Orthokinetics."

Syphilis as a Factor in Thyroid and Pituitary Disease

Lennmalm reports five cases of myxedema in syphilitic adults. The myxedema and recurrences subsided under thyroid treatment. He cites a number of similar cases from the records. In another group of patients, syphilitic thyroiditis developed in an old goiter. The symptoms were those of exophthalmic goiter; they materially improved in a personal case under mercurial and roentgen-ray treatment. Acromegaly in syphilitics may retrogress under specific treatment. His personal cases of dystrophia adiposogenitalis and a large number from the literature indicate that syphilis is a comparatively frequent factor in this condition. Improvement under specific treatment is common, as also in diabetes insipidus.—(*Svenska Lakar. Hand.*, Stockholm, December 30, 1922.)

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1425 Broadway.

A Skin Cancer Following Exposure to Radium

The case of a patient who worked with roentgen rays in his practice from 1905 to 1917, but not since then, is reported by Ward J. McNeal and George S. Willis, New York. Precautions for self-protection were carefully employed. From 1912 to June, 1920, he handled radium, without precautions for self-protection, in small amounts up to 1915, but in quite large amounts from 1915 to 1920, from 200 to 365 mg. in individual tubes, taken between the right thumb and forefinger almost every day. Various changes, which may be ascribed to the exposure to radium, began to be observed late in 1918, and since early in 1920 the skin changes have required constant care. In September, 1922, a fissure on the ball of the right thumb manifested a peculiar and extremely painful alteration in character, and on excision in October this lesion proved to be a squamous-cell carcinoma.—(*J. A. M. A.*)

The Metropolitan Life Insurance Company reports that during hte year 1922 the death rate among white policy holders in its Industrial Department declined by 1.8 per cent. from the 1921 rate, whereas, among the colored a much larger decline occurred, namely, 9.2 per cent. It adds that since 1911 most emphatic decreases for pulmonary tuberculosis have taken place among children between 25 and 44 years. For persons over 45 the death rate in 1922 increased over that of 1921.

Public Health

American Public Health Association—Fifty-second Annual Meeting

The American Public Health Association extends to the public health profession and others interested, a cordial invitation to attend its fifty-second annual meeting, in Boston, October 8-11. Headquarters will be at the Copley-Plaza Hotel.

The annual meetings of this association are always important events in the public health world, but the meeting this year is of more than usual interest since it ends the first twelve months of the new program adopted as a result of the association's reorganization in 1922. Two general sessions and twenty-six meetings of the scientific sessions will be held this year. In addition, many trips of technical and general interest have been planned around historic old Boston as part of the entertainment and educational program.

On Monday evening, October 8, the formal Opening Session will be followed by a reception. On Wednesday evening, October 10, Sir Thomas Oliver, distinguished English industrial hygienist, and Dr. George E. Vincent, President of the Rockefeller Foundation, will address the Second General Session. The scientific program, embracing all branches of public health, will be held according to sections as follows: Public Health Administration, Laboratory, Sanitary Engineering, Vital Statistics, Child Hygiene, Food and Drugs, Industrial Hygiene, Public Health Nursing, Health Education and Publicity.

Among the important subjects scheduled for discussion are papers on food inspection, growth of children, full time health officers, mental hygiene in the school program, nutrition work, the effect of so-called moonshine liquors, standards for school house construction and sanitation, epidemiology, better birth registration, organic heart disease, studies on the etiology of common colds, water supply and purification, mosquito control, etc.

An important report of the Committee on Municipal Health Department Practice will be presented in the Public Health Administration Section. At this time the announced plan for the awards to cities for distinctive community service will be discussed. The problems of health officers in small communities will be specially considered at a Round Table discussion scheduled for Wednesday A. M. The clinic on Printed Matter, which has proved valuable in past years, will be held again this year by the Section on Health Education and Publicity. At this Clinic, samples of public health publicity will be examined and criticized by experts. Of special interest also is the report of the Committee on Health Problems in Education of the Child Hygiene Section.

The September issue of the *American Journal of Public Health* carries the preliminary Annual Meeting program arranged by sections, and the October *Journal* will contain additional information. Members of the association, traveling by rail to Boston, may secure a reduction of one-fourth the regular round-trip rate.

Is Golf Dangerous to Health?

Anyone who can afford to play golf can afford to pay for an annual scientific medical examination according to Dr. Matthias Nicoll, Jr., State Commissioner of Health of New York. Dr. Nicoll, himself an enthusiastic golfer and a physician of long experience, stated that there is no question that golf may be and often is overdone, and that it is not infrequently indulged in by those who on account of their physical condition should not play at all. Accordingly he recommended what he described as "a few rules for aged golfers which all of them will resent" as follows:

1. If your physician advises against golf, don't play.
2. Don't rush between holes. You won't hold up anyone if you walk steadily at a moderate pace, and your game will not suffer thereby.
3. Choose fairly level courses if possible, and take hills very slowly.
4. Take time to digest a light lunch. Heavy eating has nothing to recommend it except sociability.
5. Don't continue the game if you feel dizzy, weak, or otherwise unfit.
6. Don't lose your temper. It won't help your game, your health, or the work of your caddy.
7. After your game and shower, protect yourself from drafts and cold winds.
8. If you must play in the rain, change into dry clothes after a shower and get a hard rubdown immediately after you come in.
9. During the off-season a moderate amount of indoor golf is a valuable form of exercise and will keep you hopeful for an early spring.

"We are all familiar," continues Dr. Nicoll, "with the golfer who has long since reached the years of discretion, and apparently passed beyond them—who plays his eighteen to thirty-six holes under the blazing sun or in the pouring rain, rushes up hill with pounding heart, labored breathing, and hands so tremulous that he must wait until his eyes have cleared and muscles steadied before taking the next shot, and at the end of the day with dragging feet and shoes that seem to weigh a ton, physically and mentally exhausted, with no appetite, and disgusted with the score, his fellow club members, and life in general, seeks his shower and longs for bed. Such a man has over-golfed. Youth can stand it, but not old age.

"For most Americans golf is a game which can be played for only a few months of the year, and then only intermittently. This is one of its greatest disadvantages as a form of exercise. Such is the fascination of the game to the average golfer, so eternally springs the hope in his breast that this day of all others will be his best, that all else is forgotten, even his physical welfare.

"Golf, as a menace to health and life of men and women of middle age and beyond, excites public interest whenever some prominent person suddenly dies on the links. It should be borne in mind, however, that for every such death there are thousands of sudden deaths which occur with or without any special physical exertion as a causative factor for which golf cannot be held in any way responsible.

"The underlying cause of sudden deaths in middle life and old age is the presence of degenerative diseases of the heart, blood vessels and kidneys. The immediate cause may be the bursting of a blood vessel in the brain, the plugging of a blood vessel by a detached fragment of vegetative growth from somewhere in the circulatory system which cuts off the local circulation from an essential nerve center in the brain or heart, or acute dilation of the heart from advanced degenerative disease of the heart walls. Such deaths occur under many circumstances, while walking quietly, sitting, and even lying in bed. A person with advanced disease of the heart, blood vessels and kidneys, whether he knows it or not, is constantly seated on a powder barrel and an explosion is sooner or later pretty certain to occur.

"Golf, like every other good thing in life, may be abused. It would be a national calamity for the false idea to prevail that there is anything intrinsically dangerous in the game for those in normal health, or even for those whose health is impaired, if they be guided by competent medical advice. The number of holes, if any, to be played at any one time should be based on the findings and advice of one's physician, preferably and probably a golfer. But the golfer himself must use his own judgment and, if possible, common sense regarding his physical limitations."

Some Sociological and Psychiatrical Aspects of the Venereal Disease Problem

Paul E. Bowers, Regional Consultant U. S. Public Health Service, says: Mankind is continually being stimulated and propelled along by three great primary urges; the urge of food, the urge of ego, and the urge of sex. While we are not in total accord with the theory propounded by Freud, that the only and the predominating force of life is the sex urge, we are compelled to admit that the urge of sex is very tremendous. One of the greatest problems confronting us, and one which seems to be undermining our social institutions, is the existence of prostitution, and the venereal diseases which corrupt the family unit and cause such contamination as is shown in the withering blight of insanity, feeblemindedness, epilepsy, and moral degeneracy.

The urge of sex is two-fold in its manifestation; the first is the conscious desire of pleasure, the second is the unconscious expression of Nature for reproduction. Nature has wisely provided that the sexual act be attended by pleasurable sensations and emotions, securing thereby perpetuity of the race, even when this thought of reproduction plays no part in the accomplishment of sexual relations.

In studying the problems of venereal disease and prostitution we are compelled to view these problems from various angles if we are to understand them and to deal with them wisely. A number of these factors will be considered very briefly.

Dance

What is the influence of the modern dance on the sexual urge? Does the intimate contact and close bodily associations of the modern dance awaken or kindle, consciously or unconsciously, the sexual passion? To the tom-tom music of the jazz orchestra the observer may find that couples pass by him in intimate embrace, in cheek to cheek fashion, hopping, twisting and turning to the rhythm of syncopated music. The dancing orgies of the primitive man had definite sexual potentialities, in which nature was manifesting her definite purpose of propagation. Have the grace, dignity and refinement of the Virginia Reel and the square dances been imitated in the modern day ballroom?

The answer is in the negative. It is certain that the dance of today, as performed in the majority of places, does not have a tendency to diminish or regulate the normal sexual urge. The reverse is quite true in many instances.

Modern Dress

It has been quite apparent that prostitutes, knowing of the value of sex appeal in dress, have in plying their vocations, assumed the extreme and risque styles of clothing. On the other hand, perfectly normal women, blindly following the decrees of fashion have dressed, and are dressing in the most suggestive styles, whether these skirts be long or short. It is a well known fact that the love of finery in the matter of clothing has led the shop girl in many instances to stray from the path of virtue.

Theatre

Within the last few years, it would almost seem to be true that the theatre has been more or less corrupted and betrayed for a price. Licentiousness has run riot on the stage. Bedroom dramas have been exceedingly popular, and even the so-called problem plays have been baited with juicy bits of sensuality to form bacchanalian feasts for the eyes and imagination of the adolescent boy and girl and the more mature adult, who are fired thereby to sexual indiscretion. Many plays which are fairly decent, except as to title, have found these suggestive titles lucrative drawing cards. It is a well known fact that smutty jokes, as a rule, even in our so-called exclusive theatres, often gain tremendous applause. Psycho-analysis has revealed that suggestive and smutty plays have afforded many persons a vicarious mode of sexual gratification. The trash-laden novels and the stories printed in many of our cheap popular magazines are devoured with great eagerness for the same reason. I found on inquiry at a bookstore near a great university, that the greatest number of the risque magazines were sold to the female students of this university. These practices have afforded sensual gratification in ways that do not bring immediate social retribution; however, they pave the way for sexual promiscuity when the compunctions of conscience have been lost, or the fears of disaster dispelled.

General Decadence of Morals

Bad companionship, vicious associations, idleness, frivolity, excessive love of pleasure, continuous desire for excitement to appease an hysterical and unsatisfied craving for excitement and novelty, which inevitably lead to promiscuity, are among the potent factors responsible for the reduction of our moral level. An examination of our divorce court records will prove the correctness of this contention, as will a glance at the headlines of our daily newspapers. A growing lack of proper regard for moral and religious teachings engenders a disrespect for the seventh commandment, which is consequently broken. Intemperance has long been a prolific source of sexual immorality. In recent years the taxicab and the automobile have played no insignificant part in sexual promiscuity. There exists today a tendency to exploit the natural sexual impulses for commercial gain. On the stage and on the screen, in the public dance hall, in our books and magazines; there is definitely expressed a purpose to turn our sexual interest and curiosity into hard cash. Our so-called classical and interpretative dancing, with its suggestive gestures and inanities, our leg shows, our excessively short skirts and peek-a-boo waists and the decrees of Dame Fashion, are not all the results of desires to express the ideals of art. These factors do stir up the ardor of the sexual urge, has wisely ordained that these manifestations of sexual expression shall exist as an effort of self- assertion against the undue repressions put upon her by the social restraints of our civilization. Let, we must view with skepticism all efforts to commercialize the sexual passion.

The Psychology of Freud

The advent of Freudianism has been attended, together with a few benefits, by numerous evils. Psycho-analysis has become a wide-spread fad and is a subject of discussion in thousands of lay-women's clubs. Even some of our universities have introduced into the class room the study of Freudian psychology with its perverse sex emphasis, and the immature minds of the students have been saturated with ribald sexuality and obscenity to the last degree under the guise of the study of psychology. Under the same mask of science, this psychology of Freud, which occasionally has a legitimate use in medicine, has been peddled over the world and many books and articles upon this subject have flooded our libraries. Many of these books may be properly regarded as vile and pernicious and would be excluded from the mails, except for their presumptuous claim of being scientific. The ethics and virtues of our forebears which have elevated the race to whatever moral heights it may have attained, are now looked upon by the youth to be but sexual

repressions and inhibitions. Likewise, religion in general has come in for its share of psycho-analysis, and this great moral police force and mental balm of the world has been reduced by the narrow type of Freudian to codified systems of sex symbolisms. In fact, the mental myopia of some of the Freudians has become so great as to lead them to perceive every ethical and social institution to be but an expression of sublimated sex instinct. Views of this sort lead to promiscuity in those social levels where we ordinarily expect to find the highest types of sexual ethics and culture.

Marriage

Under existing economic and social conditions, marriage cannot always take place at the time physical and mental attainment has made such a union desirable or possible. When we strip all emotion from the question we are bound to admit that the lack of opportunity for early marriage increases sexual promiscuity and consequently venereal disease. Those who are alert to the problems of sexual life are aware of the unrest which exists because of our standards of social ethics, and these expressions are to some degree prophetic of the changes which may come in an evolutionary manner, to our existing social conditions. It is an established fact that sexual liaisons are growing in number, and particularly among the men and women in the industrial and commercial world, and these liaisons terminate in separation, pregnancy, or marriage, according to the dictates of the parties concerned. The enormous number of divorces and separations which are constantly occurring within a few months after marriage demonstrate forcibly and practically that many of our marriages were in reality trial marriages, but one degree higher in a legal sense than common-law unions.

Prostitutes and Prostitution

It is a notorious fact that it is the male who seeks out the fallen woman in ninety cases out of a hundred, and that no less than 50 per cent of the men patronizing prostitutes are married men. Directing all the legal energies toward the woman prostitute and chasing her from pillar to post does not solve the problem of prostitution or venereal disease.

A study of the prostitute has shown, in most instances, that she is young in years; that she comes from a home broken by divorce, death or poverty; that she is without home training, and with little or no education; that her mental endowment in most instances has been poor and that she belongs to the defective mental group; and that with these serious handicaps she has struggled along in bad environment, with evil associates, and with physical poor health. In the last analysis she has been shown to be a person of defective and subnormal mental makeup, unable to battle in an adequate and normal manner with the problems of life.

Chemical Prophylaxis

The subject of chemical prophylaxis has always been the ground for debate between two groups of physicians and social workers who have had the same goal idea of disease prevention in mind. It has been contended by pedantic and moralistic authorities that the beneficient value of venereal prophylaxis, resulting in a decreased rate of infection among the persons exposed, has been greatly offset by the supposititious number of chaste and virtuous individuals who are led to forsake the path of rectitude because of the immunity from infection which has been conferred by this same prophylaxis. This belief concerning chemical prophylaxis may be traced in general to summary factors involving two main issues: (1) That the individuals constituting the body social and politic are by nature and desire essentially erotic and promiscuous, and (2) that a repression or inhibition based entirely on fear, is the main motivating factor in providing for the safe keeping and sexually hygienic living of the nation's youth and virility.

These factors lose their apparent validity under a close scrutiny. As to the status of mankind, there is of course no question as to the correctness of the opinion that all normal individuals during adolescence and adulthood, prior to the climateric, have definitely developed sexual desires. If these desires can be sublimated to social or other non-sexual aims, even then it cannot be deemed that they have been annihilated; but the presence and force of this sex instinct is not synonymous with outright eroticism or with a desire for sexual promiscuity. And the very proponents who believe that the removal of a fear repression will actuate humanity to an orgy of sensualism will be the first to declare the truth of the preceding statement. Although the sentiments and affects which have been built up through custom and tradition cannot be under ordinary circumstances considered as strong as the basic instincts, still they represent real and actual forces in the everyday life of the individual. The sexual mores of the community play a great part in the determination of the sexual life of the average individual.

The validity of a repression, based on fear, loses its chief value when it is realized that the individuals who could be best motivated by fear, are, paradoxically, the very ones who are least likely to be influenced by it. Such an individual, although the fear of infection may weight his decision will be *pari passu* of such intelligence that he will have had ample opportunity to have built up a defense mechanism against promiscuity on some more rational or altruistic basis.

Or, granting that he has sufficient intelligence to follow the devious windings of the hypothetical suppositions involved, he may decide in favor of promiscuity because of other equally valid, to him, and equally reasonable bases. Thus, the intelligent individual is not affected by the availability of venereal prophylaxis to the extent that might be thought probable.

Taking the next case of the non-intelligent individual, the case is even more striking. He has not the mentality sufficient to realize adequately the dangers involved, is apt to consider infection no worse than a "bad cold," and with his lowered mentality, his emotional sphere is incapable of being approached on a really rational level. As is common with the mentally retarded, the will power and determination cannot be expected to be strong, and he will either succumb to temptation or allow himself to be overruled by cajolery.

On the part of the male, civilization has made it necessary that he postpone marriage several years beyond adolescence, and many naturally turn to prostitution to solace these waiting years. With the female sex, the supply has been made to fit the demand, and the matter of payment, both specie and indirect, has played no small part.

Proper effective prophylaxis against venereal disease should be made readily available to all who are exposed to possible infection. Syphilis and gonorrhea are morbid cancers attacking the social fabric and we are justified in using chemical prophylaxis as one of the methods in preventing venereal disease. During the late war, every possible safeguard was thrown about the soldiers, the perils of venereal disease were shown in pictures and told in story, the redlight districts were broken up in the regions of the great army camps, and officers of the Public Health Service were on extra cantonement duty in a continual fight against vice. Yet, in spite of the sexual knowledge given and the idealism preached to the soldiers, and other safeguards used, thousands of men acquired venereal disease.

Sex Instruction

The value of sex instruction was demonstrated in a very practical way during the late war. In civil life the problem is more difficult to handle, yet the potentialities for good are greater.

The child becomes sex-conscious in the majority of instances, about nine years of age, and at this age sex instruction should be begun, and such information should be given by the parents, the problem being treated in a general way, utilizing the biological history of plants and animals, gradually correlating these facts with the history of human reproduction in a way that is not too literal or too personal. Parent-teacher associations are splendid organizations for the training of parents along the lines of methods of sex instruction, and the appropriate material for teaching can be secured by the interested parent, and the parent-teacher associations, from the United States Public Health Service.

The teaching should be brought to the child, and the parent should not wait to begin instruction until after some vicious, distorted information has been imparted to the child from sources outside the home. The habits of cleanliness should be taught for they do much to discourage the practice of self-abuse. As a child grows, his companionship, play, sports and books should be carefully supervised. Unfortunately, for the public good, the custom of chaperonage has lost its former vogue, resulting in a corresponding reduction in public morals. A sense of chivalry should be instilled into the boy by teaching him a higher regard for his mother, sister, and all women in general. Physical labor in an appropriate degree about the home, some honest toil of a healthful sort which exercises the body and teaches thrift, along with the usual hardy sports of childhood and youth, are of tremendous value in sublimating and directing the sexual urge into constructive and useful channels of expression.

At the age of puberty, the physiology of menstruation should be made known to the girl, and the nature of seminal emissions should be imparted to the boy, lest he fall into the hands of quacks who have heretofore worked enormous harm to the adolescent youth. Knowledge of venereal disease should be conveyed to the boy or girl at this time, and the ravages of syphilis and gonorrhea should be made plain. If the parents are uncertain as to their information on this subject they will find it easily obtainable from the family physician, or some officer of the state or national health service.

(Continued on page 246)

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The Death of Doctor Bishop

A valued contributor to the pages of THE MEDICAL TIMES, Doctor Seth Scott Bishop, died at his home in Chicago, on September 6th at the age of seventy-one.

Doctor Bishop was a graduate of Beloit College in arts and of New York University in medicine. His ability was recognized by Northwestern University, which granted him the honorary degrees of D.C.L. and LL.D. Doctor Bishop was professor of diseases of the nose, throat and ear, in the Medical School of Loyola Medical University of Chicago and had served as surgeon of several hospitals in that city.

As a specialist Doctor Scott took very high rank and his contributions to THE MEDICAL TIMES, commanded the respect of all men interested in his particular branch of medicine.

Doctor Bishop was a member of many societies and was regarded as one of the most outstanding specialists in this country. He is survived by Mrs. Bishop and one daughter, Miss Mabel B. Bishop, to whom THE MEDICAL TIMES extends its sincerest sympathy.

Dr. Marsh's Deserved Promotion

Dr. Edward H. Marsh of Brooklyn, a valued contributing editor of the MEDICAL TIMES, has been made Secretary of the New York State Department of Health.

Dr. Marsh is Assistant Professor of Preventive Medicine in Long Island College Hospital, and Lecturer in Hygiene in University and Bellevue Hospital Medical College. He is consulting dermatologist to the Nyack Hospital and Huntington Hospital and editor of the *Therapeutic and Dietetic Age*.

Dr. Marsh has been connected with the State Department of Health since 1917 at which time he was appointed Sanitary Supervisor. For a number of years he has served as Secretary of the Public Health Council and will continue to fill this position in connection with his new duties as Secretary of the Department. He will also have charge of the New York City branch office of the Department where he will continue to administer the post graduate courses of instruction for health officers and nurses which are conducted by the State Department of Health in cooperation with the University and Bellevue Hospital Medical College of New York University.

As Secretary of the State Department of Health he will exercise general supervision over the educational and publication work of the Department.

Military Anesthesia

The League of Nations is to investigate the whole question of chemical warfare. From a recent issue of the *New York Times* we quote the following information on the subject:

"Col. Raymond F. Bacon, chief of the Technical Division of the Chemical Warfare Service, A. E. F., said last night that the aim of the League was to make a thorough investigation, the results to be embodied in a report by the committee, which is expected to make recommendations as to the continuance of chemical warfare, determining specially the types of this kind of warfare which civilized countries should sanction or discard.

Chemists who were interviewed predicted that the committee would advise in favor of continuing chemical warfare. Restrictions, they said, would undoubtedly be urged. There was general agreement that the use of poison gas against undefended cities should be banned.

The committee's report, it was thought, will stress the advantage of employing chemistry against uniformed troops in battle as more humane and less dangerous than the old methods. The World War showed, it was said, that fewer men were killed through chemistry, and that the proportion of recoveries among the wounded was far greater than through the old type of warfare.

For example, according to Col. Bacon, if the total casualties through chemistry of a given battle should be 40,000, of whom 1,000 were killed, nine-tenths of the 39,000 put out of action would recover in a year. Using old methods of warfare, 10,000 of the 40,000 would have been killed. Of the remaining 30,000, 6,000 would die from wounds, 12,000 would be maimed for life, and 12,000 would recover in about a year.

Col. Bacon and other chemists emphasized that chemical warfare places the advantage with the most educated nation. Chemical warfare is now receiving the keen interest of American chemists."

We should like to supplement the foregoing by some quotations from Colonel J. F. C. Fuller's book, "The Reformation of War." The Colonel says that "A nation which destroys the economic resources of its enemy, destroys its eventual markets, and thus wounds itself. War must entail some loss, but the less this loss is the greater will be the victory; consequently, the military object of a nation is not to kill and destroy, but to enforce the policy of its government with the least possible loss of honor, life and property. . . . The will of a protecting army must be broken. In the past this will has been attacked by attacking the flesh of soldiers, and so consistent has this been, that the idea has arisen that the military object of war is to kill and destroy. Thus, in the popular and military imaginations, the means have obscured the end; consequently, the prevailing idea of

all parties in the recent war was destruction, to destroy each other, and so blinded were they by the means that they could not see that in the very act they were destroying themselves, not only during the war, but in the peace which must some day follow the war. I believe that the world is slowly learning this lesson, and that, as in my opinion wars are inevitable, the old idea of warfare based on destruction will be replaced by a new military ideal, the imposition of will at the least possible general loss. If this be so, then the means of warfare must be changed, for the present means are means of killing, means of blood. . . . The present implements of war must be scrapped. . . . In the recent war the gas first used was of a lethal nature. This was because soldiers and the civil suppliers of soldiers had become so accustomed to think in terms of killing. Later this conception of gas was abandoned. At the third battle of Ypres the Germans used mustard gas and disclosed to the whole world the future possibilities of gas warfare. . . . Gas is, par excellence, the weapon of demoralization, and, as it can terrorize without necessarily killing, it, more than any other known weapon, can enforce economically the policy of one nation on another."

It is quite obvious that what the Colonel is in search of is a gas that will incapacitate without killing, but he can think only of gases that wreak too great a havoc, even for his purposes.

Both of our quotations show very clearly what is in the minds of the gas advocates, but they evidently have not thought the matter out to its logical conclusion.

We humbly suggest that mass anesthesia ought to be made the goal. Why not simply aim to "etherize" the enemy or fill him with nitrous oxide? War could then be waged in a sportsmanlike and humane manner, and even become a game more absorbing than baseball or pugilism. This would serve all purposes, it seems to us, including those of civilization.

As far as we can see, an anesthetized army would be as much *hors de combat* as one would wish it to be. What need would there then be of butchery?

The Further Reduction of Obstetric Morbidity

Try as he will, the obstetrician in charge of a maternity service cannot reduce the morbidity in the wards below a certain point. The charts of his private patients in the same institution show a lower temperature curve during the first week of the puerperium. The most rigid application of asepsis and antisepsis, including the iodinization at the moment of delivery of those extensive external areas most likely to harbor organisms, fails to approximate the respective temperature curves—those of the general wards and those of the private rooms.

We may safely dismiss, then, the element of hospital technique in any attempt to account for this infection discrepancy. Practically, there remain three other things to be considered: prenatal housing, focal infections, and nutrition.

What we wish to make clear in this editorial is our conviction that the most potential of the aforesaid factors in the production of obstetric morbidity is faulty nutrition.

The evils of bad housing and of latent infections wait upon a lowering of resisting power through the failure of a proper food supply.

If some organization like the Carnegie Nutrition Laboratory of Boston would, in collaboration with the obstetric staff of some large hospital doing prenatal work, make a study of two groups of women before confinement, ignoring housing and focal infections in both groups, but correcting dietetic deficiencies in one of the groups, we are sure that the latter group would show a postpartum temperature curve comparable with that characteristic of private patients.

Such a demonstration would show the way to effect such a marked reduction in obstetric morbidity as virtually to amount to total elimination.

The Meat Question Again

We have presented editorially in recent issues of the MEDICAL TIMES both sides of the meat question, writing as impartial observers. It seems to us that certain parties are manifestly unfair in their new argument that meat should not be eaten because it may show a higher bacterial content than the droppings of animals. Meat, we believe, is usually cooked and its bacteria are different from those of the droppings of animals anyway. Such critics ought logically to oppose the drinking of certified milk. There is food for thought in the reflection that these very critics themselves have something to sell in competitive markets and are apparently commercially biased.

"Mostly Fools"

The *New York Times* recently remarked that in the metropolis no nonsense is too absurd to be taken for gospel truth by thousands. The quackish cults flourish here as nowhere else. "Anything that a good many of us will not believe, provided it be sufficiently mystical and unreasonable, has not been invented—yet."

The *Times* cites as an instance in point the gravity and credulity with which Sir Arthur Conan Doyle was listened to when he staged his ghost demonstrations in New York.

A few years ago the writer of this editorial made a first-hand investigation of most of the exploiters of human credulity then operating in the city. He found that whole hordes of apparently "nice" people were profoundly interested in the hocus-pocus dispensed by crude but brazen dervishes of every imaginable type. The revelation was a disquieting, indeed sickening one.

If these credulous ones represented only a moronic fringe on our society there would be small cause for concern, or even passing interest, but they seem to constitute the bulk of our fellows.

The truth would appear to be not so much matter of faulty or meager education as of non-educability. Such people are practically hopeless—a negative force making against a true democratic culture or evolution of intellect. They are a constant challenge to the concept of the undesirability of autocratic control of some sort. How can a decent democracy be postulated upon the basis of such a citizenry?

The Ku-Klux Syndrome

Ku Kluxism, which seeks to repress other people and regulate their lives severely, is itself the child of repression. That is to say, its exponents have themselves felt the bedevilment of repressive legislation of one sort or another, and have been thwarted by the censors in almost every way conceivable. The disease of Ku Kluxism is the result of the acceptance of such repressions and the assumption of the rôle of the arch oppressor on the part of mean-spirited people whose own subconscious cravings are of the worst possible character.

If putrid characters are repressed officially, and if in addition they try to supplement such repression, they will nevertheless emit an odor at some point so bad that they stand revealed and betrayed in any case. The trouble is that they are themselves potential drunkards and lechers and superstitious louts bewitched by paranoid morals mongers into the absurd rôle of reformers.

This is an accurate diagnosis of the Ku Kluxer. His kind is bound to afflict the country so long as the government itself goes to extremes in oppressing the people.

We tolerate on the part of our own government things which would lead to civil war if even feebly attempted by neighbor governments. This was not the temper or character of the men who founded the Republic.

The price that we pay for these things is the existence in the midst of a supposed civilization of the sordid phenomenon of Ku Kluxism, among other manifestations nearly as offensive. It is a social insanity as inevitable in the premises as any other kind, given outrageous factors certain to upset the minds of those intellectually defective, with which the country is known to abound.

Miscellany

CONDUCTED BY ARTHUR C. JACOBSON, M. D.

Myers' Tapeworm Trap

We herewith reproduce specification of letters patent No. 11,942, dated November 14, 1854.

It seems to us that Mr. Myers' interesting invention was a forerunner of many of the ingenious devices now employed by the modern gastro-enterologist in the diagnosis and treatment of certain internal diseases.

Mr. Myers failed to state how long the trap was to remain in the patient's interior, or how one was to know when the worm was trapped. There should have been a bell or gong attachment, or a light signal. Perhaps the worm gave a piercing scream when caught, and struggled violently. This appeals to us as a good indoor sport.

Baiting the trap with *any* nutritious substance, in the words of Mr. Myers, does not appeal to us, and we doubt if it ever appealed to the worms. Something like crème de mint would probably intrigue the worm's interest.

This Myers was undoubtedly a genius, and we don't hold it against him at all that his invention has been overlooked by the doctors.

UNITED STATES PATENT OFFICE

ALPHEUS MYERS OF LOGANSPORT, INDIANA

Tapeworm-Trap

Specification of Letters Patent No. 11,942, dated November 14, 1854

To all whom it may concern:

Be it known that I, ALPHEUS MYERS, M.D., of Logansport, in the county of Cass and State of Indiana, have invented a new and useful Trap for Removing Tapeworms from the Stomach and Intestines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

The object of my invention is to affect the removal of worms from the system, without employing medicines, and thereby causing much injury.

My invention consists in a trap which is baited, attached to a string, and swallowed by the patient after a fast of suitable duration to make the worm hungry. The worm seizes the bait, and its head is caught in the trap, which is then withdrawn from the patient's stomach by the string which has been left hanging from the mouth, dragging after it the whole length of the worm.

Figure 1, in the accompanying drawing, is a view, on an enlarged scale, of the trap in condition to be swallowed by the patient. Fig. 2, is a view of all the parts of the same detached. Similar letters of reference indicate corresponding parts in both figures.

The trap consists of a box *a*, of gold, platina or other metal not easily corroded, of cylindrical form with a rounded bottom, having a cover or cap *b*, of rounded form which fits to it, and is secured by a bayonet fastening or other means.

A. Myers,

Removing Tape Worms.

No. 11,942.

Patented Nov. 14, 1854.

Witnesses:

S. H. Wales.

J. W. Hamilton.

Inventor:

Alpheus Myers.

The length of the box and cap, may be about three quarters of an inch, and the diameter about one quarter of an inch. In one side of the box in the upper part near the cover, there is an opening *c*, of a sufficient size for the head of the worm to be introduced. This box contains another box *d*, of substantially similar form fitting loosely to it; and the box *d*, has an opening *e*, within it of about the same width as the opening *c*, in the outer box, the said opening *e*, having its lower edge serrated. The box *a*, is furnished inside with a stud *f*, dotted in both figures, which projects very slightly from the inner surface, so as to be capable of catching between the teeth of the lower edge of the opening *e*, as shown in Fig. 1, in dotted outline. Under the bottom of the box *d*, is a spiral spring *g*, which tends to force it upward within the outer box.

The trap is baited by taking off the cover *b*, of the exterior box, and filling the interior box with the bait which may consist of any nutritious substance. The interior box *d*, is then pushed down until the stud *f*, catches between the teeth of the opening *e*, and holds it with the openings *e*, and *c*, opposite each other, the points of the teeth being then below the lower edge of the opening *c*. The trap, having the cord *h*, attached to a ring *i*, on the lid is then swallowed. The worm, in inserting its head at the opening *e*, and eating the bait, will so far disturb the inner box as to work it free of the stud *f*, when the box will be forced upward by the spring *g*, and the worm caught behind the head, between the serrated lower edge of the opening in the interior box, and the upper edge of the opening in the exterior box. The trap and the worm may then be drawn from the stomach, by the cord *h*.

In constructing the trap, care should be taken that the spring *g*, is only strong enough to hold the worm, and not strong enough to cause his head to be cut off.

What I claim as my invention, and desire to secure by Letters Patent, is:—

A trap for the removal of tape worms from the stomach and intestines, constructed and operating substantially as herein described.

ALPHEUS MYERS.

Witnesses:
S. H. WALES,
J. W. HAMILTON.

Hemorrhagic Osteomyelitis

Max Strunsky, New York, reports a case of hemmorhagic asteomyelitis of the tibia following a fall. At operation, a cavity in the bone was found, filled with a viscid, bloody material. The cyst was curetted and scrubbed with iodin and alcohol. The incision was then enlarged over the entire length of th tibia, and the entire crest of the tibia removed. The graft was cut into fragments and dropped into the cavity, which even then was only one third filled. The patient recovered entirely in eighteen months.—(*J. A. M. A.*)

(*Continued from page 242*)

The teaching of sex hygiene is not to be confined to the child or youth alone, if we are to stop the ravages of venereal disease. Courses of mental and social hygiene should be a part of the curriculum of every high school, college and university, and the public lecture courses of our social institutions, such as the Y. M. C. A., the Y. W. C. A., Knights of Columbus, Women's Clubs and similar organizations, should deal in a methodical manner with these subjects. The veil of prudery and false modesty must be torn from the subject of venereal disease. The white light of publicity and education must be turned on the hiding places of gonorrhea and syphilis by telling and re-telling in plain, simple, unvarnished words the evils of prostitution until the public conscience is roused from its lethargy of indifference and unconcern.—(*U. S. P. H. S. Bulletin.*)

The Volunteer Societies Organized for Venereal Disease Control Work in England

There are in England two well known volunteer societies organized for the purpose of carrying on venereal disease control work, viz., The National Council for Combating Venereal Diseases, and the Society for the Prevention of Venereal Diseases.

The National Council for Combating Venereal Diseases was founded in the autumn of 1914. It was a voluntary organization composed of medical men and representatives of the principal national social organizations, the churches, and educational establishments. When the Royal Commission on Venereal Diseases issued its report in 1915, the majority of the members of the Commission joined the National Council, and many have since served as officers and members of the Executive Committee.

The following are the aims and objects of the Council:

1. To provide accurate and enlightened information as to the prevalence of these diseases, and as to the necessity for early treatment.
2. To promote the provision of greater facilities for their treatment.
3. To increase the opportunities of medical students and practitioners for the study of these diseases.
4. To encourage and assist in the dissemination of a sound knowledge of the physiological laws of life in order to raise the standard both of health and conduct.
5. To cooperate with existing associations, to seek their approval and support, and to give advice when desired.
6. To arrange in connection with such organizations for courses of lectures and to supervise the preparation of suitable literature.
7. To promote such legislative, social and administrative reforms as are relevant to the foregoing aims and objects.

As suggested by the Royal Commission, from 1915 onwards the National Council has been recognized by the various Government Departments concerned with the problem of venereal disease as a responsible organization.

For a number of years the National Council has been receiving a subsidy from the Central Government to assist it in carrying on its activities.

In the recent controversy as to the advisability of advocating the distribution of prophylactic packets to the civilian community, the Council, after careful consideration of all the evidence by their Medical Committee, came to the conclusion that the disadvantages of the prophylactic packet outweigh the advantages, and continue in their original policy of advising continuously open clinics and the provision of facilities for immediate preventive treatment applied by a skilled person under medical supervision.

The seventh annual report of the National Council for the year June, 1921, to June, 1922, contains the following statement:

"Feeling that there was some misunderstanding as to the Council's attitude in regard to self-disinfection, the policy was recapitulated in a resolution forwarded by the Medical Committee to the Executive and unanimously adopted on their recommendation by the Council on February 13.

"Resolution: That in view of the misunderstanding shown by many medical men concerning the attitude of the National Council for Combating Venereal Diseases, on the subject of Prophylaxis, the policy of the Council should be more clearly defined; it has never opposed or questioned that medical practitioners should give advice to their patients on the subject of prophylaxis. Similarly they do not disapprove of instruction to medical students in prophylactic methods at Medical Schools. It is the broadcast and indiscriminate propaganda by leaflets and otherwise concerning prophylaxis that the Council opposes."

The Society for the Prevention of Venereal Disease was founded in October, 1919, at the initiative of Mr. H. Wansey Bayly, and at once received strong medical any lay support. Its objects are to fill in the gap in the propaganda policy of the National Council for Combating Venereal Disease left open by their opposition to the instruction of the public in the prevention of venereal disease by immediate personal disinfection.

The Society for the Prevention of Venereal Disease entirely endorse the moral propaganda and educational policy of the National Council for Combating Venereal Disease, except as regards the latter's opposition to medical propaganda, but primarily for the prevention of venereal disease by immediate self-disinfection.

Their constitution published in their report of their first annual general meeting states their objects to be:

1. To instruct the public as to (a) the vital importance of self-disinfection at the time of exposure to risk as a preventative of venereal disease, and (b) the methods of application.
2. To advocate such further steps for the prevention of venereal disease as may be deemed advisable by the Executive Committee.

At first they issued "Directions for Men" only, as they considered immediate self-disinfection to be always unreliable and frequently unpracticable for women. Later they received numerous applications for "Directions" from women, and realizing that personal disinfection had some definite value for a certain class of women, then issued their "Directions for Women."

The "Directions for Men" are issued broadcast, and are distributed in public conveniences by several County and Borough Councils.

The "Directions for Women" are "issued only by request" at the discretion of the Honorary Secretary.

The Society for the Prevention of Venereal Disease has received strong support from Members of Parliamnt, the medical and lay press, trade union organizations, the National Birth-rate Commission, the Labour Party, the Anti-Waste League, Public Health Authorities, and the Shipping Federation, and has made remarkable progress since its foundation.

It is interesting to note that in a recent pamphlet "How to Fight Venereal Disease," published by the National Council for Combating Venereal Diseases, there is an apparent indication of a change of attitude toward the question of prophylaxis and self-disinfection.

The National Council is compelled to concern itself not only with preventing people from running the risk of Venereal Disease by sexual misconduct, but also with preventing them from contracting Venereal Disease after the risk has been run. There is no moral reason whatever why the misconduct of any individual should be allowed to make him a menace to public health, as he will be if he contracts such disease. The National Council attaches great importance, therefore, to preventive measures and it has constantly called public attention to them.

There is no doubt that such Venereal Disease would be prevented if it were generally known that cleansing with soap and water, or better still, skilled disinfection by, or under the direction of a medical practitioner, with suitable antiseptics should be carried on within one or two hours after a risk has been taken. The sooner the disinfection, and the more skillfully it is applied, the greater the probability that the disease can be altogether prevented, the germs being killed before they develop.

Apart from absolute continence, the only sure way to avoid Venereal Disease is in a marriage where both parties have a high ideal of the married state. If a high moral standard were universal, other preventative measures would soon become unnecessary. But we must deal with life as it is. While the Council lays the utmost stress on moral propaganda, written and spoken, it cannot confine its activities to this. The world is not perfect, weakness of character, bad environments, often defeat eithical teaching.

Who Shall Teach, and What Shall He Teach?

Since Adam and Eve were cast out of the Garden we have divided certain things into two categories. They began it with their girdles of fig leaves, and as we have advanced in civilization we have followed in their footsteps. Clothing, where it was a cosmetic effect rather than a climatic necessity, was limited to a girdle. Our anatomy came to take on the same quality of hesitancy, and certain parts of our bodies we denominated as the "pudenda," the things to be ashamed of.

So, in the same manner as civilization went on, we classed together certain ills and affections of the flesh and denominated them the "venereal diseases," and either spoke of them with bated breath or else spoke not at all, believing perhaps, like the ostrich, that by ignoring them we could demonstrate that they did not exist.

Sex education, the teaching of the young how they are made and why, has for many years been in this taboo class, and it was a brave father or mother who would frankly and honestly instruct the children in the matter of sex development and the mysteries of reproduction. This over-delicacy, this aversion to

facts, alike in its nature to the spirit which decided that one part of our body was something to be ashamed of while another was quite within the pale, has for long been responsible for uneducated adolescents, or, what is worse, for those who learned only distorted facts and much obscenity from equally ignorant informers instead of the wonderful mysteries of pro-creation.

The solution of the problem, is, of course, difficult. So is that of the regulation of prostitution, or the limitation of the spread of the so-called venereal diseases. Nevertheless, that has not deterred many minds from bending their energies to this task with the hope that from many counsels might spring some satisfactory answer.

Sir G. Archdall Reid, K. B. E., M. D., etc., in the *International Journal of Public Health*, Vol. II, No. 6 (Nov., Dec., 1921), pp. 592-3, says:

But in Christendom, and especially among English-speaking peoples, a convention forbids the discussion of sex and its problems between children and adults. The former, therefore, learn nothing from the latter, except extreme reticence. Nevertheless a knowldge of sex and its functions is traditional among boys, whose discussions are often obscene. As the twig is bent the tree grows. Children, therefore, are the real teachers of sexual morality, such as it is. Many men grow up unmoral rather than immoral. They know of course that unchastity is classed as wicked, but they are no more affected by this opinion than beef-eating Englishmen in India are affected by the opinions of Hindus. Even in old age such people remember past intrigues with satisfaction. The question as to whether adults should hold familiar discourse with children about sex is not within the range of practical politics. The convention of reticence is too strong. Nevertheless it is remarkable that the very people who most desire chastity should most object to the real teaching of it.

It seems to us that the crux of the matter lies in the sentence, "The convention of reticence is too strong." For many past generations we have been taught not to speak of these things. We have allowed our children to acquire such knowledge as they might in a haphazard way, making them, as Sir Archdall says, "the real teachers of sexual morality, such as it is." We have sent our daughters to the marriage bed and motherhood in the innocence and ignorance of babyhood, to puzzle out, too often perhaps with disgusted minds, facts and conditions which might, with proper instruction, have had a dignified meaning and a proper place in the scheme of the creation of things.

Even from the so-called Victorian age, when our young ladies were wont to shriek at mice and faint on the slightest provocation, we have advanced to a more practical, a much more sound materialism. Clothes are more rational, manners more frank and morals, save for the post-bellum attack of mental measles which has swept over the world, probably no worse. If we are to continue in the spirit of engaging frankness, why should we limit it to those things which have not half the bearing on the welfare of the nation which proper education as to self contains? The old Greek admonition of Gnothi Seauton is quite as applicable in these times as in the days of Pindar and the Grecian games.

Not everyone is competent to give this instruction. The reasons are not far to seek. Not all are endowed with the requisite tact. Not all are endowed with the requisite knowledge. That which our fathers did not do comes hard to our hands. What they did not instruct us in we find it hard to pass on our own younger generation. But there must be a beginning somewhere, and those of us who lack knowledge, have the possibility of learning. Knowledge along this line lies in the hands of the disciples of Aesculapius, and if we do not teach the youth we may at least instruct the parents, ground them in the simple fundamentals which are, after all, the requisites for the childish comprehension. Complicated courses in physiology are not essential in the instruction of those of younger years. Plain facts, such facts as are essential, thoughtfully stated by one who occupies a position of trust and love, are sufficient for their needs. For this reason it seems preferable that instruction in these matters of sex development be given by the child's parents rather than by one not related. There would naturally be less embarrassment resulting in information imparted in this manner, and it would seem that relations of trust and confidence would be thereby fostered and strengthened. School instruction in such matters, under the inhibition of the "convention of reticence," does not seem to afford the same opportunity for frank, serious and rational discussion and explanation as would the teaching by the parent.

It is scarcely debatable that we have for too long deferred this process of enlightenment, governing ourselves by the old idea that these were things of which we should not speak. Is it not time that the question were faced squarely, that the issue were honestly met? It is admitted that in the campaign against the spread of "venereal diseases" instruction in regard to them plays at least some part. If this be so, why should not reasonable teaching in regard to sex development have a bearing along this line also?

Make less of a mystery of the function of the perpetuation of the species and there will probably be fewer conclaves of small boys under the back porch absorbing distorted facts and obscene signs to the injury of their moral sense, and probably later to their physical well being.

The trend of the times is along the line of more frankness in many things, and it seems as though there should be a general move toward enlightenment on this subject, which has such a vital bearing on the right start of the citizens of tomorrow and, through them, on the general welfare of the nation.—(*The Military Surgeon.*)

The Public Health Work of the American Red Cross

Public health work in the cities, although in some cases leaving much to be desired through the lack of co-operation of the people for whose good the work is done, is at least efficient and well organized. In the country, by the very nature of the case, this does not hold true. The rural districts, with a few bright exceptions, are hardly organized at all. And for that reason the death rate in the country is high.

The American Red Cross, by promoting public health nursing and nutrition work in rural and semi-rural districts, and by co-operating wherever possible with existing health agencies, is trying to remedy this condition. And it is meeting with success. Under the direction of its Chapters 1,075 public health nurses are at work in communities where there are no other health agencies. During a recent three-month period, these nurses made 339,881 home visits, inspected 603,606 school children and made 38,799 visits to schools.

Supplementing this work are the Nutrition Service and the classes in Home Hygiene and Care of the Sick. Since 1914, 304,427 certificates have been issued to women and girls completing the course, which has now been introduced into many schools, and is being given to the Girl Scouts.

The Nutrition Service has developed three Chapter activities: nutrition classes for undernourished children, hot luncheons for schools, and a course in Food Selection for mothers. During the year 1921-1922 approximately 1,800 nutrition classes were conducted, with an enrollment of 105,000. The classes included groups of children, mothers, grade teachers, social workers, women and girls in industry and business. During that period 21,000 home visits were made by Chapter nutrition workers.

The Health Advisory Committee, consisting of such men as the late Dr. Herman M. Biggs, of New York, State Health Commissioner and Director of the Rockefeller Institute, Dr. F. B. Lund, of Boston, Dr. Thomas S. Cullen, of Johns Hopkins, has heartily endorsed the Red Cross program, and has recommended the expansion of the organization to include in its permanent membership from ten to twenty per cent. of the population.

That such an increase in the membership would add tremendously to the efficiency of the Red Cross cannot be doubted. Nor is it an impossibility to obtain such an increase. It is simply a matter of awakening the people generally to the necessity for public health work. The inertia and ignorance of the unenlightened are all that have ever stood in the way of the complete triumph of preventive medicine.

It is up to those who do know, to enlighten those who don't. It is up to the physicians and surgeons and public health workers of the country to throw the weight of their opinion on the side of the Red Cross. During the Roll Call, which will be held this year from November 11 to 29, the Red Cross hopes that every physician in the country will not only pay his dollar and join the organization for another year, but that he will do what he can to urge others to join.

The Law and Disease Prevention

"A court decision important in the annals of health legislation" is the way the United States Public Health Service at Washington characterizes the recent ruling of the District Court of Appeals, Second District, Division 1, of California.

Marie Clemente arrested and charged with conducting a disorderly house petitioned the court for a writ of habeas corpus setting forth that she was being illegally detained and restrained of her liberty by the chief of police of the City of Los Angeles acting under instructions from the health department of that city not to release her until she had submitted to an examination ordered to be made by the health department for the purpose of determining whether she was affected with a contagious or infectious disease.

The District Court of Appeals held, that information that a woman is not only conducting a house of ill-fame, but also personally participating in the unlawful acts carried on therein furnishes reasonable ground to believe that she is affected with an infectious disease, authorizing the health department to en-

force quarantine measures against her. The woman was remanded to the custody of the chief of police.

As far back as 1919 the United States Public Health Service, in a bulletin prepared by direction of the Surgeon General, V.D. Bulletin No. 39, advocated a model city ordinance which provided that all persons reasonably suspected of having a social disease in the infectious stage be examined by the health officer or under his direction. Whom might be considered a reasonable suspect in such cases has been a point of controversy in many localities. The recent decision in California, says the Public Health Service, helps to clear up this much debated question.

Venereal Disease Clinic at Toledo Municipal Hospital

This clinic established at the time of the war has continued and expanded. It is a strictly municipal undertaking. It contains a ward for men and one for women. Record cards are reproduced. A social worker investigates the financial status of patient, those able to pay a regular fee being sent to physicians, those able to pay a nominal fee contributing to the upkeep of the clinic. She also does follow-up work. Methods of treatment are outlined. The number of treatments of all patients has risen from 7,653 to 27,110 in a period of three years, the number of interned patients from 201 to 949.—(*Amer. Jour. Syph.*, January, 1923.)

Medical Education for Negro Students

A statement issued recently by the Department of the Interior calls attention to the seriously inadequate facilities for the education of negro physicians, as well as of negro dentists, pharmacists and nurses. It is shown that while there is one white physician for every 553 white people, there is only one colored physician for every 3,194 colored people in the United States, or in proportion to the population about one colored physician to every six white physicians. The disparity in dentists is even greater, there being only one colored dentist to every ten white dentists in proportion respectively to the colored and white populations. There are only two medical schools which are moderately well equipped to furnish instruction in medicine, dentistry and pharmacy. They are the Howard University School of Medicine at Washington, and Meharry Medical College at Nashville. The two schools at present are handicapped from the standpoint of teaching staff, laboratory facilities and equipment so that they are enabled to admit to their classes only one fourth or one third of the qualified students who apply. It is evident, therefore, that the shortage of negro physicians is bound to become more serious unless these institutions are given sufficient financial aid to enlarge their staffs and to secure additional equipment and teaching facilities.

Although medical schools for white students are open to negro students also, few attend those schools, scarcely a dozen each year being graduated from these institutions. For both Howard University and Meharry Medical College, the great Foundations are at present offering large funds on conditions that each institution from its friends and alumni shall raise a corresponding sum. Both these institutions are securing excellent results from such funds as are availble, and are well worthy of consideration by those who have money to give for extending the opportunities in medical education to larger numbers of negro students.—(*J. A. M. A.*)

Filled Milk in Wisconsin

This and other compounds are shipped out of the state and advertised and sold by many dealers in other states as substitutes for milk. Labels on the cans of some of the compounds suggest that this produnt is practically equivalent to or better than genuine evaporated milk.

The Supreme Court based the right of Wisconsin to outlaw "Hebe" and other milk compounds on the police power of the state, and declared the law valid for three reasons:

1. Because the law is intended to prevent fraud and deception.
2. Because it protects public health and welfare.
3. Because it promotes the general prosperity by preserving a great industry of the state.

Skimmed milk is all right in its place, it seems, and cocoanut oil all right in its place, but the mixture lacks the food value of whole milk. The latest investigations of Prof. H. Steenbock of the University of Wisconsin prove that when milk is skimmed by the commercial separator only one-tenth of the fat-soluble is left in the skim milk. Cocoanut oil has none of this necessary element for child growth.

Justice Charles H. Crownhart, who wrote the decision and the accompanying statement of fact, pointed out that the history of legislation relating to filled milk was most persuasive. "It will be seen", said he, "that the compounds have been considered inimical to public welfare by a large portion of the people of this country."

He pointed out that thirty-three states had adopted standards for condensed or evaporated milk; that the manufacture and sale of filled milk had been absolutely prohibited in New Jersey, New York and Wisconsin; that five other states had prescribed standards for condensed or evaporated milk that in effect prohibit filled milk; and that three states had passed laws which permit filled milk to be sold as "imitation milk".

Justice Crownhart found an even more emphatic expression of the people's wishes in the Voigt Filled Milk Bill now before Congress, which had passed the House 250 to 40.

"The compounds," he said, "are in exact imitation of the genuine evaporated milk. They are produced and sold by the manufacturer cheaper than the genuine. They are susceptible of being sold to the public for the genuine at the same price. They are therefore capable of being used for fraudulent purposes and to deceive purchasers."

"If used as a substitute for milk, the public health may be impaired, not because the compounds are in themselves deleterious, but because they lack in certain food elements essential to a well balanced dietary."

Justice Crownhart maintained that the power of the state could be exercised for the prosperity and for the "preservation of a great industry of the state against injury in markets outside." He referred to Florida's winning fight to defend her great orange industry.

In regard to Wisconsin's right to protect her dairy industry he said: "The principle of allowing these compounds to be manufactured and sold followed to its logical conclusion will lead from 'filled' milk to 'filled' butter, from 'filled' butter to 'filled' cheese, and finally we have the 'synthetic' cow taking place of the domestic animal of the farm. A great industry of a state will decline, a victim of 'national advertising' of cheap and deceptive substitutes."

Thus the great dairy state of Wisconsin delivered itself mightily in protection of public welfare, and the prosperity of the state by defending its fundamental industry—dairying.

Dairy and consumers' interests have taken the fight against the filled milk traffic into the national arena. More than a year ago they put their forces behind a bill introduced by Congressman Edward Voigt of Wisconsin, H. R. 8086, prohibiting the movement in interstate and foreign commerce of commercial filled milk preparations.

Correspondence

An Answer to Dr. Zweisohn

To the Editor of THE MEDICAL TIMES:

In your June issue our friend and critic, Dr. L. W. Zweisohn, is once again guilty of a misstatement in connection with Christian Science. In way of correction I will say that Christian Science lecturers do not make statements to the effect that there is no epidemic when such condition seems to prevail in human affairs. While it is true, as I have frequently pointed out in your columns, that Christian Science denies the reality of disease as a part of God's creation, it by no means ignores it as a phase of human experience. Quite the contrary, this Science of Christianity deals not only directly with disease but also teaches and in a gratifying manner is today demonstrating that since diseased conditions are purely the result of wrong thinking, they can be successfully met and destroyed only through the process of right thinking. All of which, I may add, is in strict accordance with the teachings of both the Old and the New Testament. There is, furthermore, nothing strange or unusual in the distinction which Christian Science makes between the real and that which it designates as unreal. For instance, among other usages of the word "real" responsible lexicographers employ it to indicate that which takes on the nature of fact, actual being. something existing intrinsically or inherently as distinguished from the seeming or apparent." Consistent with this meaning of the word Christian Scientists hold that Spirit and spiritual ideas alone constitute the fact or reality of being, while matter and things pertaining thereto, including all phases of disease, are classified as unreal and temporal. It was precisely this distinction between the real and the unreal to which Christ Jesus referred when he said, "It is the Spirit that quickeneth; the flesh profiteth nothing."

CHARLES E. HEITMAN,
Christian Science Committee on Publication.

On Yellow Fever

To the Editor of the MEDICAL TIMES:—

The publication of the statistics of yellow fever in the annual report of the Rockefeller Foundation has brought about not a little comment on the part of daily newspapers. Once prevalent in practically every American coast region from latitude 30° north to 30° south, yellow fever is now confined to two small areas in Mexico and two or three in Brazil. In the three years end ng 1921, there was but one death from yellow fever reported within the registration area of the United States. Control and practical elimination of the disease has been accomplished—first by the protection of humanity against infection from the yellow fever mosquito, *Stegomyia fasciata* (*Stegomyia calopus*, Meigs); and, secondly, the protection of the mosquito against infected humanity.

To speak the name yellow fever in a community is almost to create a panic; but to mention malaria will not make the least ripple of excitement except in localities where the Volstead law is not enforced.

But even in its epidemic outbreaks yellow fever has never been so deadly as malaria, a very great number of the deaths from which are due to the puncture of swamp mosquitoes, chiefly to several species of Anopheles. The epidemic outbreaks of yellow fever have been at intervals separated by many years. Malaria is always with us—as steady and regular as the tides. For the greater part the deaths are confined to four states whose rates per 100,000 of population are: Florida, 35.1; Louisiana, 32.5; Mississippi, 38.2; and South Carolina, 28.8. In the northern half of the United States the death rate has an average of about 0.2 per 100,000 of population. The rate among negroes is practically double that of white people.

The foregoing figures are taken from the mortality statistics for 1920. The figures for 1921, not yet released for publication, do not show a material changes. There is a lowering rate in southern states, and an increased rate in the registration area as a whole. So far as protective measures are concerned the problem is already solved; it is to keep humanity and mosquitoes away from each other.

J. M. REDWAY.

Meteorological Laboratory, Mount Vernon, N. Y.

Diagnosis and Treatment

Encephalitis Lethargica

Charles A. Lust, Queensboro Hospital, Brooklyn, N. Y., reports:

A girl of 15 years of age was sent in as a possible poliomyelitis case, on August 10, 1922, in coma.

Patient's general health had not been good, for she was subject to convulsions until seven years of age. About a year ago her father thinks she had influenza. He stated that she had not been as healthy during the past year as previously, and that she had lost weight.

On July 30, 1922, the present illness began, with headache and pain in the teeth. The patient became sluggish and obstinately constipated. Some citrate of magnesia was given, and the patient's appetite returned and she seemed brighter. On August 1, the patient vomited and became drowsy. This drowsiness gradually deepened to coma, which became so profound that the patient was unable to void feces or urine. The patient was then sent into the Queensboro Hospital.

Examination on Admission: The patient is a poorly nourished female, 15 years of age. Her skin is pale and moist. She is comatose. Pulse rate, 56; respirations, 26; temperature, 97.4.

Examination of eyes shows pupils moderately contracted, regular, react to light. There is a slight paralysis of the left facial muscles. Her knee-jerks are slightly decreased. Babinski is doubtful. Kernigs are positive. Brudzinski positive. Tache cerebrale is present. Marked muscular weakness of the arms and forearms is noted. There is evidence of pain on bending the neck, though no stiffness or retraction.

Laboratory Findings (August 19). Urine—Negative. Blood Count—Leucocytes, 11,400 (polys. 82 per cent., large lymphocytes 6 per cent., small lymphocytes 12 per cent.). Spinal Fluid—Clear, under increased pressure; cell count, 240 (90 per cent. mononuclears); globulin increased; Fehling's reduced.

Patient's general condition gradually became worse. Internal strabismus of right eye, and nystagmus developed. The pulse became weaker and more rapid. She sank into a coma from which she could not be aroused, and died on August 21.

Treatment: As patient was obstinately constipated and retained her urine, she was given a turpentine enema, daily, and was catheterized every eight hours. At first, she swallowed her food without much difficulty, but later retained it in her mouth for long periods of time; therefore, she was gavaged four times daily. When her pulse became accelerated, digalen 10 minims, by hypodermic, was given every four hours, but did not reduce the rate. Diagnosis—encephalitis lethargica.—(*Weekly Bull. N. Y. Dept of Health*, Sept. 1, 1923).

Magnesium Sulphate for Gonorrheal Ophthalmia

Kirkpatrick at Madras began to apply hypertonic solution of magnesium sulphate to the treatment of inflammatory conditions of the conjunctiva and surface of the cornea. After four years' experience, he reported in 1920 his favorable experience with this method in corneal ulcers and especially in gonorrheal ophthalmia. No eye in fair condition when the treatment was begun was lost.

His method was thus described: "The strength of the solution used varies from 40 grains to the ounce to saturation, and this is applied in an eye bath for five minutes every 2 or 3 hours; in addition the conjunctival sac is thoroughly irrigated by the surgeon once a day or oftener. In cases of gonorrheal ophthalmia, both urotropin and stock gonococcal vaccines are given as well."

It is interesting to learn from the last report of the government Ophthalmic Hospial at Madras (for the year 1921) that this method has been continued for all cases of that class with continued good results. The report states: "Forty cases in all, adults and children, were treated by irrigation with saturated mag. sulph. solution, as described by Kirkpatrick (*Brit. Jour. Oph.*, June, 1920), with slight modifications. The treatment is carried out in the following manner:

An assistant flushes the conjunctival sac several times a day with the solution put up in 2 lb. bottles fitted with cork and glass rods after the manner of the familiar laboratory wash bottle. Adult patients in addition use the solution repeatedly throughout the day (at least 5 minutes in every 2 hours) in the egg-cup shaped eye douche. Between the irrigations Ag NO_3 grs. 3 to the oz. is instilled 2 or 3 times a day.

Very satisfactory results were obtained. There were only two failures, but these 2 came to the hospital with ulceration of both corneae, and even one of these left with useful vision in one eye after trephning had been done as a safeguard against subsequent rise of tension.—(*Amer. Jour. Ophth.*, January, 1923.)

Broncho-Pneumonia Simulating Croup

W. T. Cannon, Physician-in-Charge, Kingston Ave. Hospital, Brooklyn, N. Y., makes this report:

On October 22, at 8 P. M., R. C., a female infant of 18 months, suddenly developed a serious nasal discharge. This was soon followed by marked dyspnea and cyanosis. The symptoms abated, somewhat, during the night. In the morning, the child became so sick that a physician was called. He advised immediate removal to the hospital. This was effected the next day. On admission, the child seemed to be suffering from an attack of croup, showing marked dyspnea, cyanosis, fever, 102.4° F.

Though there were no signs of any cerebral or meningeal irritation, the child seemed unable to hold up its head, and showed some slight weakness of the right upper extremity. The patellar reflexes were absent. The plantars were diminished.

The lungs revealed nothing of importance. The heart sounds were of poor quality.

Blood Count: Leucocytes, 29,600 in 1 c. m. (Polys. 77 per cent).

On October 24, there was slight improvement in the child's condition. The cyanosis was less marked. The breathing was still stertorcus, but not dyspneic.

On examination of the lungs sibilant and sonorous rales were found over both lungs, anteriorly and posteriorly. At the right base there was some increased voice transmission and subcrepitant rales. The lower part of the scapular region revealed similar conditions.

On October 30, the patient was much more comfortable. Dyspnea was practically gone. Temperature, pulse and respiration were normal. The lungs still had some mucus rales. On November 9th, the child went home, recovered.

Treatment: On admission the child was inturbated. This afforded no relief and the tube was soon removed. On the basis of a possible poliomyelitis the child's spine was tapped. The fluid was under slightly increased pressure, otherwise it was negative. Flaxseed poultices to the chest, morphine, atrophine and camphor in oil were given, as indicated.

Conclusions: Because of the sudden onset, clinical manifestations, course of the disease, and laboratory findings, a diagnosis of broncho-pneumonia was made.

This case is of interest because of its simulation of laryngeal croup, caused either by diphtheria or paralysis of the laryngeal muscles.—(*Weekly Bull. N. Y. Dept. of Health*, Sept. 1, 1923).

Interesting Case of Bronchiectatic Lung Abscess

Dr. David E. Ehrlich, Roentgenologist at Willard Parker Hospital, reports:

F. C., male, 32 years of age, driver by occupation, was referred

to the Willard Parker X-Ray Department, on March 8th, 1923, by the Eastern District Tuberculosis Clinic for examination. His complaint was a cough of three months' standing, without any acute illness antedating the same. For the past five weeks he had noted a foul odor from his sputum, and a purulent expectoration, more marked in the A. M. Physical signs revealed a process in the right upper lobe and this, associated with the marked foulness of breath, led to the clinical diagnosis of lung abscess.

Roentgen ray examination revealed irregular patchy consolidation of the entire right upper lobe, with multiple partial fluid levels, the process being typical of bronchiectatic abscess. This was confirmed in a subsequent examination by Dr. L. T. LeWald, Attending Roentgenologist to the Willard Parker Hospital, who stressed the following: "Lateral exposure shows the greater portion of the abscess formation centrally located. There is a change of the level of the fluid in various cavities on change in the position of the patient. There is no evidence of pulmonary tuberculosis in the opposite lung, or in the lower lobe of the right lung. Operative intervention is advisable in order to drain the cavities and to remove, if possible, the fetid type of expectoration."

A two stage operation was performed by Dr. Nathan Green, at St. Luke's Hospital, the lung being opened, the pus pockets broken up and the cavity packed.

The interesting feature of this case was the lack of any etiological history, such as preceding ambulatory influenza or pneumonia.—(*Bull. N. Y. Dept. Health.*)

The Early Treatment of Cancer

The cancer problem of a community is not how many operative cures have been reported from various surgical centers, but how late cases receive treatment, and the results of treatment, in that particular community. With this point in view, an exhibit was attempted bearing on the treatment of the disease at Harper Hospital, as a cross section of an average situation. As there were no figures of final three or five year cures, data were compiled for some of the commoner cancers, showing the percentage of total admissions for cancer in which radical treatment at the time of operation could be given, and how many patients survived operation; that is, the number of patients in whom treatment offered a chance of cure. A rough estimate of cures could then be made, based on the reports from the Mayo Clinic of the percentage of resections in which patients remained cured five years. Figures were also available regarding the length of time symptoms were noted, and from these some of the difficulties of early diagnosis can be discussed. The data reported by Harry C. Saltzstein, Detroit, are from Harper Hospital records, for the years 1918-1921, and are presented arranged for stomach, colon, rectum and breast. In the group of cases analyzed, probable cures did not exceed 1.5 per cent. of total hospital admissions for stomach cancer; 6 per cent. for colon, and 6 per cent. for rectum. In 80 per cent. of breast cases there was already involvement of the axilla, with the probable prognosis of from 15 to 25 per cent. of cures. Early rather than classical symptoms must be stressed in considering gastro-intestinal cancer, if cases are to be seen earlier. As it is more difficult to diagnose gastro-intestinal cancer, it is likewise more difficult for the public to respond to warnings for gastro-intestinal cancer than for external growths. Ten per cent. of the patients examined at several different clinics in response to cancer week publicity had cancer. Another 12 or 13 per cent. had precancerous lesions.—(*J. A. M. A.*)

Amenability of Leprosy to Treatment

Leprosy is, in a measure, amenable to treatment, says the U. S. Public Health Service. During the last 10 years (1912-21) a considerable percentage of the lepers segregated at the Kalihi Hospital near Honolulu and on Molokai Island have been paroled; that is, they have been released as being "not a menace to the public health," but have been required to report for examination at certain intervals which vary with the individual case. Of those paroled about 13 per cent. have relapsed and have returned to segregation; but about one-fourth of these were later paroled for the second time. In all, 242 lepers were paroled; 31 relapsed and seven of these were later paroled. Ten were completely relased from parole.

The chance of arresting the disease decreased with the length of time that it had been allowed to go without treatment unless this period was seven years or more. Apparently, patients who survive without treatment for seven years possess powers of resistance that slightly increase their chances for marked improvement under treatment.

The parole system was begun in 1912 and has worked admirably. Those paroled appear to have told their friends that the conditions existing at the hospital were good; and the mere fact that they had been released has shown that segregation might lead to cure and not to life-long confinement, as it almost invariably did previous to 1912. As a consequence many lepers, instead of concealing the disease up to the last possible moment (and thereby spreading it through the community) are now surrendering of their own accord and taking treatment. This earlier surrender and earlier treatment hasten the degree of improvement that will secure parole and will later, perhaps, complete release. About 70 per cent. of those who have been paroled were in segregation for less than two years.—*Bull. N. Y. Dept. Health.*)

Findings in a Survey of Cripples in New York City

That there are about 36,000 cripples in the city. That of all cripples about 50 per cent. are under 16 years of age; that about 63 per cent. became crippled before reaching the age of 16 years. That nearly one-half of the cases discovered by the field canvass were not being treated; that there are in the city probably about 1,000 cases of poliomyelitis, Pott's disease, and tuberculosis of the joints not yet diagnosed; that there are about 3,700 cases with these diseases that have been diagnosed, but have ceased to attend clinics; that over 50 per cent. of cripples are not known to any agency. That very few cripples attend high school. That there are enough operative beds and sufficient clinical facilities, but insufficient number of convalescent and custodial beds. That in the social work for cripples there are portions of the field uncovered, and at the same time somewhat vague limits assigned to the work of various agencies.—(*Bull. N. Y. Dept. Health.*)

Diagnosis and Relief of Sterility

In further attempts to find evidence of pathologic changes in the plevis in women who fail to become pregnant, Arthur H. Curtis, Chicago, searched for minor tubal lesions. A study of fallopian tubes removed from a series of 300 patients revealed that tubes without evident gross alteration, or at the most presenting only slight adhesions, quite often are crippled by healed inflammatory changes of the mucous membrane. Such lesions within the tubes easily escape detection in the operating room; palpable thickening may be wanting, and probing of the tube is a gross procedure at best. During the last two years, when it has been necessary to open the abdomen of sterile patients, Curtis has employed Luer syringe air inflation of apparently patent fallopian tubes. Under favorable circumstances, this simple procedure is helpful in several ways: it reveals the presence of otherwise undemonstrable obstructions within the tube; minor strictures, when discovered, may be overcome by forcible syringe pressure; the anatomic limitations of grossly palpable obstruction, possibly amenable to plastic operation, may be more definitely determined, and, at the completion of plastic operations on the tube, it is possible to test the patency of the reconstructed lumen.—(*J. A. M. A.*)

The Intraveonus Administration of Cyanid of Mercury in Infants

This is the report of the case of a child, suffering from congenital syphilitic iridocyclitis, who was given thirty-four injections of cyanid of mercury in the epicranial and jugular veins with marked benefit.

The complete harmlessness of cyanid of mercury in intravenous injections is now well known. Furthermore it seems to be specially valuable in syphilitic affections of the eye and of optic nerve. For infants, the author used O.1 c.c. of a 1 per cent solution diluted in ten times its volume of physiological salt solution. This dose (1 mg. mercury cyanid) appears to be sufficient for a child weighing six kilos. Extreme salivation, thirst and insomnia denote intolerance. In the case reported, no digestive disturbances were caused, and the patient gained 1.1 kilo in seven weeks.—(*International Medical and Surgical Survey.*)

Cancer of the Rectum in the Presence of a Four Plus Wassermann

Golob had a patient treated with salvarsan with the result that she became worse, the growth extending rapidly. The author believes that the treponema is actively antagonistic to carcinoma and holds it in abeyance. Statement of Dr. Brown of the Rockefeller Institute is quoted as follows: "In regard to the effect of salvarsan on carcinoma we have no definite information. In our own laboratory, however, we have noted that the administration of salvarsan to animals with transplanted tumors will frequently give rise to pronounced increase in the growth. This may or may not be applicable to human disease."—(*N. Y. Med. Jour.*, Dec. 20, 1922.)

Syphilis

Pulmonary Syphilis

Syphilis of the lung is more common than formerly believed. With the discovery of the spirocheta, the Wassermann blood test, and the use of the X-rays our knowledge of pulmonary syphilis has been greatly advanced, says Frank Conlin.

The pathology of lung syphilis is better known than its clinical manifestations. A latent form is encountered at times in which gummata may be present. These give no signs or symptoms. The patient may appear to be in good health and well-nourished, or may complain only of a slight cough. Upon careful physical examination a slight area of dullness may be the only discovery and the X-rays show a typical shadow near the hilum. In considering the cases with trivial lung findings and other definite lesions of syphilis one should be careful not to overlook these pulmonary manifestations nor consider them lightly.

The diagnosis of pulmonary syphilis has to be made by exclusion, as there is nothing absolutely characteristic in the clinical history or in the physical signs.

Virchow stated "some patients die of so-called tuberculosis for lack of anti-syphilitic treatment."

The main points in the differential diagnosis may be tabulated as follows:

Tuberculosis	*Syphilis*
Attacks the apex first, then the apex of the lower lobe.	Attacks the hilum first, then the base.
Progresses along a certain route.	Progress not constant.
Tends to cavitation.	Tends to fibrosis.
Cavities due to destruction, may be bronchiectatic.	Cavities usually bronchiectatic.
Rarely causes stenosis.	Often causes stenosis.
More common, less circumscribed and bilateral.	Less common, circumscribed and unilateral.

The X-ray is invaluable in the diagnosis of pulmonary syphilis, frequently revealing the flame-shaped shadow about, the hilum with the fibrous strands running out along the septa. If the disease is not recognized early, death may result from general weakness or from complications.

The treatment of pulmonary syphilis is the same as for syphilis in any other part of the body. Since a negative Wassermann reaction in pulmonary lues is hard to obtain, intensive and prolonged treatment is necessary and repeated blood and spinal Wasserman tests should be made.

Syphilis and tuberculosis may co-exist in the same individual, but the differential diagnosis offers no insurmountable obstacles. —(*Jour. Rad.*, Vol. iii, No. 3.)

Diagnosis of Cardiovascular Syphilis

The first essential in the diagnosis of cardiovascular syphilis is that it be given a place among the various diagnoses to be considered in any patient in whom heart disease is deemed to be present. Every case affected by syphilis is a case of potential heart disease, i. e., cardiovascular syphilis, says W. G. Reid.

Cardiovascular syphilis may be symptomless unless complications have ensued. If there be symptoms, pain and shortness of breath, both located by the patient as under the upper sternum, are the most typical. The pain is wont to show a radiation similar to that occurring in angina pectoris. The physical signs vary according to the nature and extent of the lesions present. Enlargement downward and to the left, and an abnormal supracardiac dullness are common. The most frequent murmur is a systolic one at the aortic area. The aortic second sound is often of a duller tone as in arteriosclerosis. There is nothing characteristic in the blood pressure findings unless the complication of aortic insufficiency has ensued, the blood pressure is within normal limits.

A positive Wassermann reaction is of value in supporting the diagnosis, but a negative report is often received and should not be allowed to shake the diagnosis of cardiovascular syphilis if sufficient other data point to the presence of that disease. The Roentgen findings are often of great value, but it is inconsistent with our knowledge of the pathology of the disease to expect that the *x*-ray will detect all of the early cases. In advanced cases the diagnosis is usually simple, but in early cases it often happens that only a tentative diagnosis can be made. The therapeutic test for syphilis is of distinct value in doubtful cases.

The chief conditions to be differentiated are: Non-specific aortitis, arteriosclerosis, hypertensive heart disease, rheumatic heart disease, pulmonary tuberculosis, mediastinal tumors and tabes dorsalis.—(*Boston Med. and Surg. Jour.*, February, 1923.)

Syphilis of the Sympathetic Nervous System

Franckel & Juster after reviewing conditions in which it has been proved that the sympathetic nervous system is a factor, proceed to the consideration of other conditions which probably have their origin in disease of the sympathetic nervous system. They conclude:

In what instances are we justified in employing specific treatment?

A. Whenever syphilis is shown by the Wassermann reaction, or is present in the case of the parents or the wife or husband of the patient.

B. Whenever we do not find in one of these syndromes a definite non-syphilitic origin.

1. For certain of them syphilis is the only etiological factor actually known; this is the case, for example, in Reynaud's disease and Hebra's disease.

2. In other affections, syphilis is a relatively rare cause. Tuberculosis in Addison's disease and cancer in acanthosis nigricans are much more frequent than syphilis. One must exclude cancer or tuberculosis before beginning specific treatment. In acanthosis, it is even justifiable to perform an exploratory laparotomy, so frequent is cancer in the non-juvenile forms.

3. In many cases of irregular heart action with no obvious cause, with the exception of conditions due to the menopause, the rôle of syphilis is primary. In these cases specific treatment should always be tried.

4. As for diabetes and Basedow's disease, both may be of traumatic origin and perhaps follow a violent emotion; with syphilis, these two causes sum up nearly all the etiologic knowledge we possess about them. In their absence and especially in the absence of traumatism (although syphilis and traumatism may be joined) and since no precise etiologic knowledge has come to light, specific treatment is attempted.

5. For alopecia, scleroderma, affections of the nails, the rôle of the glandular deficiency seems to dominate that of the causal infection. Even when syphilis is the origin of the syndrome, it appears to act more often by attacking first one or more endocrine glands, which act in their turn on the sympathetic nerves, rather than by a primary attack on this system. Often in cases of alopecia where syphilis is clearly the cause, with a strongly positive Wassermann reaction, specific treatment only gives slight or no results, while opotherapy will give remarkable results. It is necessary, therefore, in these cases to combine the two treatments.—(*Ann. des mal. vén.*, January, 19123.)

Prevention of Congenital Syphilis

Since the Wassermann reaction has come into use, the statistics regarding the prevalence of syphilis among pregnant women have changed, says G. R. Wagner. Von Winckel before the introduction of serodiagnosis, reckoned 2.2 per cent. of luetics among 11,377 parturient women. On the basis of examination with the Wassermann reaction Heynemann found 10 per cent.; Sanger in 2,000 cases found 9 per cent. of manifest or latent syphilis. This corresponds approximately with the number of positive reactions among the non-pregnant. (Hubert found among 8,652 patients of the Romberg clinic 8.8 per cent. positive Wassermann reactions.)

The number of luetic women among the pregnant and parturient seems high, but we know today that a positive Wassermann reaction does not always mean latent lues in women in the period of gestation, viz., in the last months of pregnancy, during the puerperium and during the first weeks after delivery.

In the Frauenklinik in Prague signs of florid or past luetic infection were found in only 0.8 per cent., in 3 of these 43 cases (7 per cent. of the luetic) a negative Wassermann reaction. Positive reaction without other evident signs of lues in 2,040 pregnant women, in whom the test was made from blood taken from the arm, 4.8 per cent.; in 3,096 parturient women, the placental blood being used for the test, 7.3 per cent. were positive; of these in 226 was the control, from blood taken from the arm, negative in 33 cases (15 per cent.).

More than two-thirds of the patients were married. Manifest signs of lues in unmarried 1.5 per cent., in married 0.3 per cent.; positive Wassermann reaction in married 0.8 per cent., in unmarried 5 per cent.

While the figures for the incidence of syphilis in pregnant women before the Wassermann reaction are too low, the new statistics based on the Wassermann reaction are too high.

During the second half of pregnancy the blood of the pregnant woman is very rich in lipoids. But a blood test taken early in pregnancy is of undiminished value.

A test of the blood of the pregnant woman early in pregnancy is advised. The earlier in pregnancy treatment of syphilis is instituted the better the results.—(*Med. Klin.*, January 1, 1923.)

Syphilitic Backache

Warren Thompson says backache presents a common and frequently one of the most difficult problems arising in the course of the day's work of the physician. Among the many causes for this complaint, syphilis has received but little attention.

Syphilitic involvement of bone tissue is not uncommon and is generally recognized, but when syphilis attacks the vertebral column it is too frequently overlooked. The usual sites involved are the cervical and lumbar regions. Pain is usually the chief symptom. It may come on suddenly or gradually, extending over a long period of time and manifesting itself by a general soreness. The most characteristic feature of the condition is that the pain, although quite constant, is invariably intensified at night. Local tenderness is marked and increased by percussion over the affected area. There are also limitation of motion and hypertonicity of the muscles. Given a case with the combination of a stiff back and restricted mobility, one is justified in suspecting syphilis as the underlying cause.

The pathology is similar to syphilis of the bone found elsewhere in the body. It may be a simple periostitis or an osteitis or a combination of both. The tendency is to form new bone and the nodules thus formed press on the nerve roots and cause pain.

The diagnosis of syphilitic backache necessitates the careful exclusion of all other possible factors producing backache. Special attention should be directed to several conditions with which it is particularly liable to be confused, namely, osteoarthritis from focal infection, tuberculosis, metastatic invasion of the spine from malignant tumors, and typhoid spine. Infective arthritis usually involves many vertebrae, whereas syphilitic spondylitis is characterized by the involvement of a limited number of vertebrae. Tuberculosis is particularly likely to cause confusion. In one series of 70 cases of supposedly tuberculous spondylitis in the Foundling Hospital in London, 7% showed positive Wassermann reactions and cleared up under antileutic treatment. One writer gives syphilis as the cause of backache in 50% of the conditions which have heretofore been ascribed to tuberculosis. Careful search for syphilis elsewhere in the body is of the utmost importance.

Syphilis of the bone responds readily to antileutic treatment, the pain disappears readily and the bony deposits rapidly absorb.

The prognosis in backache resulting from syphilitic spondylitis is excellent.

Consider syphilis as a possibility in all cases of indefinite backache and make use of all means of diagnosis, *x*-ray, Wassermann examination, and therapeutic tests.

Amer. Jour. of Med. Sci., vol. clxiv, No. 1, July, 1922.

The Clinical Aspect of the Initial Lesion of Syphilis in the Male. Notes on 2100 Cases

The sore was multiple in 23 per cent of cases. The diameter of the initial lesion may vary from that ofa pin head to that of a crown piece. Those of larger size are usually found on the shaft of the penis or on the pubis. The shape, unless the sore be secondarily infected, is regular, and is either circular or oval. The sores are usually not tender. Enlargement of lymphatic glands is sometimes characteristic. A very important and absolutely diagnostic feature when present is the condition known as noninflammatory edema. Among the genital chancres in the series, 47.2 per cent were papuloerosive, commencing as papule, rarely seen at this stage but only, as a rule, when the surface has become abraded; 19.4 per cent were granulating, appearing on the skin of the penis or scrotum or on the pubis; 1.5 per cent were abrasive, usually appearing on the glans penis; 6 per cent were papulo-ulcerative, occurring in the preputial sac; 0.9 per cent were phagedenic, situated in the coronal sulcus or on the glans penis, especially under a long foreskin; 2.1 per cent meatal, usually involving only one side of the fossa navicularis and markedly indurated; 20.3 per cent were a primary sore with phimosis, with induration felt on palpating the sore and the noninflammatory edema imparting a violaceous color to overlying and surrounding parts, especially well seen at the tip of the phimosed prepuce. Among the extragenital chancres, that of the lip (27 cases) was the most common, and was of the papulo-erosive type, with appreciable surrounding induration. Painless enlargement of the submaxillary gland on the affected side was always present. Chancre of the tongue (3 cases) occurred on the dorsum, was clearly oval with surrounding induration, and of erosive type. Chancre of the tonsil (2 cases) showed marked painless adenopathy on the same side of the neck, both cases being of the ulcerative type. Chancre of the eyelid in the only case seen involved the margin of the upper lid near the inner canthus and was of ulcerative type. Chancre of the fingers occurred in four instances, in three of which the condition involved the margin between the nail and the skin; the fourth had a large bulla involving the whole of the terminal phalanx of the right forefinger in front of and at the sides of the nail. Chancres of the other skin surfaces (11 cases) were all of the granulating type.—(*International Medical and Surgical Survey.*)

A Note on General Paresis at the Danvers State Hospital.

H. M. Watkins concludes that routine administration of antisyphilitic therapy is called for in all cases of paresis. Practically no ill effects have been observed under intensive treatment, and twenty per cent. are able to "carry on" outside. Some patients reside in the community, returning once a week for treatment and carrying on their former occupations the remainder of the week. They are followed up by Social Service Department, adjustments are made in the community, and work occasionally changed. They are also seen at clinics and assistance is given in every possible way. The author outlines treatment, and states that by treatment the terminal stages are shortened, in contrast to the untreated case, when the paretic remained in bed for several weeks or months before the end came.—(*Boston Med. and Surg. Jour.*, July 27, 1922.)

Syphilitic Backache.

Warren Thompson summarizes: Backache as a chief complaint may be due to syphilitic spondylitis. The diagnosis is made chiefly by (1) the roentgen rays, (2) evidence of syphilis elsewhere in the body, (3) the Wassermann test, and (4) the therapeutic test.

Syphilis may involve any part of the spine; the most frequent location, according to the literature, being in the cervical vertebrae.

Pathology is similar to syphilis of bone elsewhere in the body. Nervous manifestations depend on the part of the vertebral column involved and the extent of the morbid process.

Whitney in the examination of 544 syphilitics diagnosed syphilitic joint disease in 83, or 15.2 per cent., and of this number 41 showed involvement of the spine.—(*Am. Jour. Med. Sci.*, July, 1922.)

Syphilis in General Practice

Sir D'Arcy Power points out the various sources of possible error in the diagnosis of syphilis, made by general practitioners. He says that many physicians fail to make a correct diagnosis because of the social position of the patient or because of the unusual mode of infection. Other cases which go incorrectly diagnosed are those of congenital syphilitics who do not develop stigmata until maturity or until injured, when the stigmata sometimes appear. The physician should have a clear understanding of the modifying effect of syphilis upon other diseases. In concluding, Power calls attention to the fact that syphilis affects a sufficiently large number of the population to make it worth while to bear in mind the possibility of syphilis in many of the obscure and chonic inflammations which do not respond to the ordinary methods of treatment.—(*Lancet*, May 27, 1922.)

Observations on the Precipitin Reaction for Syphilis

Parallel tests of Wassermann and precipitin reactions made by Willson B. Moody, Omaha, on 1,500 serums yielded complete agreement in 1,483 serums. The Wassermann reaction was positive and the precipitin negative in fourteen instances, and the Wassermann was negative and the precipitin positive in three. In three instances in which the Wassermann was positive and the precipitin negative, the tests were repeated and the reactions were found to agree (positive). In one case, the Wassermann was negative and the precipitin positive, and at necropsy syphilitic aortitis with aneurysm was found. In one instance with repeated tests, the Wassermann was always positive, and at no time could any trace of precipitation be made out. It is assumed that failure to agree the first time in the three serums was due to error in technic or in interpretation. It may also be noted that among the discrepancies the majority occurred early in the study and so may in large part be due to inexperience. Numerous tests were made on cerebrospinal fluids, without success, the precipitin test being very unreliable. Positive reactions occurred clearly only when considerable traumatic blood was present. In all Wassermann tests, the antisheep system was used, with amounts approximating 0.1 c.c., and with three antigens (10 units.)—(*J. A. M. A.*)

Transmission of Syphilis by a Bite.

Martini reports two cases of syphilis which developed after patients had been bitten by a small boy. The boy had been under treatment with neo-arsphenamin for several months at the time. —(*Ref. Med.*, Naples, May 15, 1922.)